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OCCASIONAL 98
PAPER

JAPANESE
AGRICULTURAL
POLICIES:
AN OVERVIEW

農業政策



BUREAU OF
AGRICULTURAL ECONOMICS

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AGRICULTURAL ECONOMICS

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Foreword

Japan is the largest importer of agricultural commodities in the world and currently provides a market for around one-fifth of Australia's agricultural exports. However, Japan also provides its own agricultural sector with a higher level of protection than do any of the other major developed economies, at considerable cost to its export industries and to its economy in general. Hence, any changes in the form or level of Japanese agricultural protection can be of major consequence, not only for the Japanese economy, but also for the volume of world trade in agricultural and manufactured commodities and for the prices of those commodities on world markets.

The Bureau published a detailed review of Japanese agricultural policies in 1981. A major objective of this paper is to update that earlier analysis in the light of several important developments which have occurred during the 1980s, particularly the dramatic increase in the value of the yen and the fall in food prices on world markets. In tandem with the continued use of import quotas as a major protective device, these developments have resulted in a marked increase in the level of agricultural protection in Japan in recent years. However, there has also been some improvement in the prospects for a gradual liberalisation of Japan's agricultural policies.

Research by the Bureau into Japan's agricultural policies is continuing and this paper provides a basis for a more detailed and comprehensive analysis of those policies. A detailed analysis of the Japanese beef market is also being carried out. It is hoped that these studies, in association with the Bureau's recent work on the Common Agricultural Policy of the European Community and the analysis of US agricultural policies currently being undertaken, will contribute to the rapidly growing debate in world policy circles about agricultural protectionism. This work takes on added significance as agricultural commodities are included in the current round of multilateral trade negotiations.

This paper was prepared in the Economic and Policy Analysis Branch of the Bureau. Paul O'Mara was the project manager and principal author. Major contributions to the paper were made by Graeme Tie, Peter Minnis, Paul Riethmuller, Jane Madden (Department of Trade), Nancy Wallace, Neil Andrews and Robyn Coote. The commodities branches of the Bureau supplied much of the detailed material on which appendix A is based.

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February 1987

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SUMMARY

Japan is now the largest importer of agricultural commodities in the world. Over the past two decades, it has replaced Western Europe as the most important market for Australian exports of rural origin. In 1985-86, for example, Japan accounted for one-fifth of Australia's agricultural exports. Nevertheless, the growth in agricultural trade between the two countries has not been as rapid as it might have been, largely because of the protection provided to the Japanese agricultural sector.

The Japanese agricultural sector is, in fact, more highly protected than agriculture in any of the other major world economies. Further, the level of protection has increased sharply in recent years, reflecting the interaction of the appreciation of the yen and the continued use of import quotas as a major protective device. Because of the direct and important bearing which these policies have on economic well-being, not only in Japan but also in many other countries, including Australia, it is clearly desirable to develop a thorough understanding of Japanese agricultural policies and the way in which they affect both production and world trade in agricultural products.

Historical and institutional background

Traditionally, Japan has adopted three basic approaches to protection of its agricultural sector — direct subsidies (paid for by the taxpayer), limits on the volume of agricultural imports, and levies on imports. For most industries, two and sometimes all three of these measures have been used.

Several key factors appear to have influenced the evolution of Japanese agricultural policies in the period since the Second World War. These include:

- the emphasis placed on food security and the tendency to equate food security with self-sufficiency;
- the desire to ensure that the incomes of farm families are comparable with the incomes of other Japanese families;
- the desire to achieve reasonable stability in prices received by farmers and paid by consumers for agricultural commodities;

- the political influence of the farm lobby; and
- the growing pressures for increased access of imports, arising both from within Japan (where the adverse effects of agricultural protection are becoming more apparent) and from Japan's trading partners.

Agricultural protection

Protection of the rural sector in Japan has had an adverse impact on consumers, taxpayers and the economy as a whole. Moreover, while agricultural protectionism in Japan has been aimed essentially at attaining domestic objectives, it has also had important international consequences.

Several studies have been undertaken in an effort to determine the impact of Japan's agricultural protection policies on its economy and their more general effect on world trade in agricultural commodities. The estimates vary, but estimates of the loss to the Japanese economy in the second half of the 1970s

range to as high as US\$6000m a year or about 1 per cent of gross domestic product. Estimates of the impact of the grain and meat policies of the three major East Asian market economies (Japan, the Republic of Korea and Taiwan) on world market prices indicate that they have depressed prices by between 2–3 per cent (for coarse grains and for non-ruminant meat) and 9 per cent (ruminant meat). The reductions in world prices of these commodities have had an adverse effect on the economies of countries which export them. These include not only some developed economies such as Australia and New Zealand but also several of the less developed countries.

Macroeconomic environment

Perhaps the most marked change in Japan since the publication in 1981 of the Bureau's study of Japanese agricultural policies has occurred in its macroeconomic environment. The key features of this change have been slower economic growth, increased unemployment, lower rates of inflation and the marked appreciation of the exchange rate, especially since mid-1985.

The appreciation of the exchange rate and the continued use of restrictions on imports have, together, increased the level of protection provided to Japanese agriculture relative to the level prevailing at the end of the 1970s. It is likely, therefore, that the cost of this protection borne by Japanese consumers has increased during the 1980s, as has its adverse effect on the overall economic well-being of Japanese society. For example, it is estimated in this paper that the recent relative increase in costs borne by Japanese consumers has been equivalent to between 3 per cent and 8 per cent of the total annual expenditure of a representative Japanese household or between about 11 per cent and 29 per cent of its annual expenditure on food. A further implication of this increase in agricultural protection is that the burden borne by Japanese export industries is greater than would otherwise have been the case, given the rise in the value of the yen.

It also seems likely that the recent increase in protection has further distorted world trade. Japanese agricultural imports are likely to have been less than they would have been under a less restrictive trading policy, while exports may have been less because of the additional costs imposed on Japanese export industries by the support given to the agricultural sector.

Politics of agricultural protectionism

The commitment to agricultural protectionism remains very strong in Japan and, while there appears to be little prospect of any significant change in this situation in the short term, there is potential for gradual change in the longer term. For example, just before the July 1986 general election a redistribution of seats was effected in the House of Representatives; seven seats were taken from rural districts and eight were added to metropolitan constituencies. While this redistribution did not appreciably reduce the heavy electoral malapportionment in favour of the rural areas it nevertheless has set a precedent for possible changes.

Another significant recent development has been the erosion of some of the power of the farm lobby. This can be attributed to the increasing number of farmers participating in off-farm work and to the development of tensions between full-time and part-time farmers, which appears to have injected some disunity into the farm lobby.

Attitudes to food security

During the 1980s there has been a marked turnaround in the world agricultural situation. The general perception in the second half of the 1970s was of a developing global food crisis and, so, high food prices. It is now generally accepted that, in the medium to longer term, the outlook is for world food production to exceed consumption, resulting in downward pressure on food prices. Given this outlook, it is possible that the Japanese Government will reappraise its existing policies with respect to food security and self-sufficiency.

In this context, it is worth noting that surveys indicate that there has been some erosion of support by the Japanese public for food self-sufficiency. Moreover, this weakening in support could accelerate as it becomes clearer that the operation of the agricultural protection arrangements has not permitted the full benefit of the marked fall in world food prices to be passed on to consumers. Estimates presented in this paper indicate that the potential savings to consumers, if the fall in world food prices in the period September 1985 to August 1986 had been passed on to Japanese consumers, would have ranged from the equivalent of about 3 per cent to 7 per cent of total expenditure per household.

Another indicator of a possible change in policy direction is the report of the Advisory Group on Economic Structural Adjustment for International Harmony released in April 1986. In this report, the Advisory Group, established by Prime Minister Nakasone, drew attention to the steadily escalating surpluses in the Japanese current account and expressed concern about the consequences for both the Japanese and world economies should the surpluses continue. The essential thrust of the recommendations made in the report was that the Japanese economy should be gradually restructured to make it less dependent on exports and more reliant on domestically generated growth.

The report encompassed a wide range of policy issues including, most importantly from Australia's viewpoint, Japanese agricultural policies. In the report, the Advisory Group acknowledged the need for the early initiation of policies for the structural reform of agriculture and for greater reliance on the use of market mechanisms. It also recommended that, apart from certain 'basic farm products', efforts should be made to increase imports of agricultural products (including processed products) and, where products are subject to restrictions on the volume of imports, efforts should be made to increase market access. Overall, the report indicates Japan's growing awareness of the importance of improving the access of imports to its domestic market. However,

the report is very general in nature and notably lacking in discussion of specific measures to bring about reform. The extent of the Japanese Government's actual commitment to the implementation of the Advisory Group's recommendations also remains to be demonstrated.

Alternative policy approaches

Given that Japan may gradually become less restrictive in its agricultural policies, it is crucial that Japanese policy makers now recognise the most cost effective means of achieving the objectives which have traditionally been emphasised in Japanese agricultural policies.

A move toward a less restrictive agricultural policy would generate major benefits for the Japanese economy and for the world economic community. Costs of agricultural products to Japanese consumers would be reduced, overall economic well-being in Japan would be improved and many other economies dependent on agricultural exports would also benefit.

To the extent that food security continues to be valued by Japanese society, there may be some economic justification for the provision of a direct subsidy (or deficiency payment) to Japanese farmers even under less restrictive agricultural policies. However, such subsidies should not be open-ended, but rather should reflect the value which Japanese society places on increased food security. Further, other avenues for enhancing the perception of food security — such as direct investment by Japanese firms in agricultural industries overseas, measures to encourage additional stockholding of non-perishable food commodities within Japan, and long term trade contracts for the supply of agricultural commodities to Japan — should receive equal recognition and support.

Of course, a more market oriented approach, perhaps supplemented by the payment of direct subsidies to farmers, may not result in a distribution of income that is acceptable to Japanese society. However, any such problem could be addressed directly by using the taxation system to raise funds which could be used

to increase the incomes of needy households. Such arrangements could also be designed to preserve the size and vitality of rural communities, should that continue to be a desirable objective in Japan.

Japan is fortunate in that, because of its high population density and high and rising living standards, very valuable alternative uses exist for some of its farm land — for example, additional housing and recreational facilities, the demand for which has grown rapidly in response to growth in real incomes. Studies could be

undertaken to assess the demand for land used in this way. That demand could be made effective in the marketplace by relaxing zoning restrictions and, in the case of recreational facilities, by establishing a government agency to purchase land for these purposes. Such demand would serve to limit the fall in land prices as Japanese agricultural policies become less restrictive. Further, additional recreational facilities, once established, could provide new economic opportunities for at least some of Japan's rural communities.

1. Introduction

Over the past two decades, Japan has replaced Western Europe as the single most important market for Australia's rural exports, accounting for some 20 per cent of the value of Australia's agricultural exports in 1985-86. More generally, Japan has emerged as the world's largest importer of agricultural commodities. Nevertheless, the growth in imports has been severely restricted by the high level of protection given to the Japanese agricultural sector. In fact, Japanese agriculture is more highly protected than the agricultural sectors of the other major world economies (table 1), with the level of agricultural protection in Japan increasing sharply during the 1980s. Therefore, the level of and changes in Japanese agricultural protection have major implications not only for the Japanese economy but also for world trade in agricultural commodities and hence for the economic performance of many other countries.

In the period 1978-80 the Bureau extensively reviewed the forces which have moulded Japan's agricultural policies, the methods used by Japan to protect its agricultural industries and some implications of those policies for agricultural production and trade in Japan (see BAE 1981). It was suggested that among the major influences on the formulation of agricultural policy in Japan have been the objectives of a high level of food self-sufficiency in order to increase food security, reasonable parity between the incomes of farm and non-farm families, and relative stability in the domestic prices of agricultural commodities. In addition, it was noted that a malapportionment of electoral boundaries in Japan had increased the political influence of farmers. Such factors have culminated in the extensive use of a variety of mechanisms designed to support Japanese agricultural industries, including

quantitative restrictions on imports, import tariffs and levies, and production subsidies for farmers.

A major objective of this paper is to complement the material presented in the earlier Bureau study of Japanese agricultural policies by reviewing and assessing some major developments which have occurred during the 1980s. In fact, the mechanisms used by Japan to protect its agricultural industries have changed little during the 1980s. For example, quantitative import restrictions continue to play a major role. However, there have been major changes during the 1980s in the macroeconomic environment of Japan and in the world trading environment for farm commodities. In particular, there has been a marked increase in the Japanese exchange rate since 1985 and the prices of many agricultural commodities have fallen significantly on international markets.

The combined effect of the appreciation of the yen, the fall in world food prices and the continuing extensive use of quantitative import restrictions has been a marked increase in the effective protection afforded Japanese agricultural industries. Hence, transfers of income from Japanese consumers to Japanese farmers, the extent of resource misallocation within Japan, the burden of protection borne by Japanese exporting industries and the distortion of world trading patterns are all likely to have increased sharply in recent years.

However, recently there has been some improvement in the prospect for gradual liberalisation of Japan's agricultural policies. The electoral influence of Japanese farmers seems to be waning. Further, the now widely accepted view that real food prices on the world market will trend downward over the medium to longer term may encourage Japan to place greater reliance on international trade rather than on self-sufficiency as a means of achieving food security. Indeed, it is

1 Ratio of domestic producer and consumer prices to world prices of selected commodities in industrial countries in 1980-82

Country or region	Wheat		Coarse grains		Rice		Beef and lamb	
	Producer price	Consumer price	Producer price	Consumer price	Producer price	Consumer price	Producer price	Consumer price
Australia	1.04	1.08	1.00	1.00	1.15	1.75	1.00	1.00
Canada	1.15	1.12	1.00	1.00	1.00	1.00	1.00	1.00
European Community ^a	1.25	1.30	1.40	1.40	1.40	1.40	1.90	1.90
Other Europe ^b	1.70	1.70	1.45	1.45	1.00	1.00	2.10	2.10
Japan	3.80	1.25	4.30	1.30	3.30	2.90	4.00	4.00
New Zealand	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
United States	1.15	1.00	1.00	1.00	1.30	1.00	1.00	1.00
	Pork and poultry		Dairy products		Sugar		Weighted average ^c	
	Producer price	Consumer price	Producer price	Consumer price	Producer price	Consumer price	Producer price	Consumer price
Australia	1.00	1.00	1.30	1.40	1.00	1.40	1.04	1.09
Canada	1.10	1.10	1.95	1.95	1.30	1.30	1.17	1.16
European Community ^a	1.25	1.25	1.75	1.80	1.50	1.70	1.54	1.56
Other Europe ^b	1.35	1.35	2.40	2.40	1.80	1.80	1.84	1.81
Japan	1.50	1.50	2.90	2.90	3.00	2.60	2.44	2.08
New Zealand	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
United States	1.00	1.00	2.00	2.00	1.40	1.40	1.16	1.17

^a Excludes Greece, Portugal and Spain. ^b Austria, Finland, Norway, Sweden, Switzerland. ^c Averages are weighted by the values of production and consumption at border prices.

Source: World Bank (1986, p.112).

clear that most of the other major objectives of Japanese agricultural policy, such as parity between the incomes of farm and non-farm households, could be achieved using alternative, more cost effective, policy instruments. Recent major policy documents prepared in Japan seem to recognise and support in principle the potential benefits that could flow from a more market oriented approach to agricultural policy and the liberalisation of international trade.

The next chapter of this paper provides a brief review of agricultural protection in

Japan, the forces moulding that protection, and recent estimates of its impact on the Japanese and international economies. (More detailed discussion is included in the appendixes.) This is followed by a review of recent changes in the macroeconomic environment of Japan and an assessment of the implications of those changes for agricultural protection. The discussion then moves to recent changes in the political environment in Japan. Finally, the focus is on policy options which are available to Japan in the agricultural sphere.

2. Historical and institutional background

Japan has adopted three traditional approaches to supporting or protecting its agricultural industries:

- direct subsidy payments from the national Treasury;
- quantitative restrictions on the volume of imports; and
- levies imposed on imports.

For most agricultural industries, at least two of these supportive or protective measures are used. The coarse grains industry appears to be an exception, with imports used for feeding livestock being admitted free of restriction or impost, although a tariff quota is imposed on imports used for industrial purposes. At the other extreme, the dairy, beef and other livestock industries are supported by all three measures. For the rice industry, imports are almost totally excluded and producers are further assisted by direct subsidies.

The measures used to protect the major agricultural industries in Japan are summarised in table 2 and discussed in more detail in appendix A. It is clear from the material presented in appendix A that, while some changes have occurred during the 1980s in the rates of direct subsidy and import duties and in the size of import quotas, the main thrust of Japan's agricultural protection has changed little.

The Bureau, in its earlier study of Japanese agriculture (BAE 1981), suggested that there were several key factors which had influenced the evolution of agricultural policies in Japan, namely:

- the importance of food security to Japanese people and the tendency in Japan to equate food security with self-sufficiency;
- a desire to ensure that the incomes of farm families are comparable with the incomes of other Japanese families;
- a desire to achieve reasonable stability in the prices received by Japanese farmers and paid by Japanese consumers for

- agricultural commodities;
- a desire to maintain the size and vitality of rural communities;
- the considerable influence wielded by the farm lobby in Japan; and
- the growing pressures for import liberalisation from inside Japan, where the costs of agricultural protection are becoming more apparent, and from major trading partners which are being adversely affected by continuing limitations on access to Japan.

The first three factors received considerable emphasis in the Agricultural Basic Law of 1961, which continues to be the blueprint for Japanese agricultural policy. The main objectives of that law are set out in appendix B.

2.1 Self-sufficiency

The argument most frequently used to rationalise Japan's agricultural protectionism remains the desire to achieve food security by maximising food self-sufficiency. As a result of living on small, densely populated, resource-scarce islands, the Japanese people feel vulnerable with respect to food supplies, making them 'receptive' to policies which increase food security, even if it is at a considerable cost. Japan's experience following the Second World War demonstrated this vulnerability, as did the 1973 soybean embargo by the United States and the international food crisis of the mid-1970s (Chisholm and Tyers 1982). Events such as the US embargo on grain exports to the USSR reinforced Japan's concerns about long term access to food supplies. These concerns underlie the 1980 all-party Diet resolution which called for policies to increase Japan's food self-sufficiency (George and Saxon 1986).

However, official estimates indicate that, because agricultural production is not keeping pace with demand growth, the

2 Measures of protection or support in Japanese agricultural industries: by commodity

Commodity	Direct subsidy from national Treasury	Quantitative restrictions	Import duties
Rice	Yes	Yes (imports almost totally excluded)	—
Wheat and barley	Yes	Yes	Yes
Coarse grains (other than barley)	No	Tariff quota system if used for industrial purposes	Duty-free if used for livestock feeding
Sugar	Yes	No	Yes
Fruit	No	Yes	Yes
Beef	Yes — funds raised from import duties used to finance producer subsidies	Yes	Yes
Dairy products	Yes	Yes	Yes
Fish	No	Yes	Yes
Forest products	Yes	No	Yes

level of self-sufficiency is steadily declining. Official projections published in August 1975 (MAFF 1975) for the period to 1985 assumed an objective of 75 per cent self-sufficiency in food, while more recent projections have 73 per cent self-sufficiency as a target for 1990. Both levels reflect a sharp fall from the 90 per cent target for 1960. Further, such official self-sufficiency levels do not accurately depict Japan's real dependence on imports. If inputs of intermediate products (mainly feed grains and concentrates) are taken into account, the self-sufficiency level in the latter part of the 1970s was around 44 per cent (BAE 1981) compared with the official figure of 74 per cent.

2.2 Income parity

The steady deterioration of the incomes of farmers relative to other workers during the rapid industrial growth in the 1950s led to strong demands for agricultural protection on the grounds of equity and social justice. These demands were made effective through two important and related channels — the electoral power of farmers and the influence of agricultural co-operatives (which will be discussed later). Hence, income parity between rural families and other Japanese families

became a cornerstone of the Agricultural Basic Law of 1961.

In the two decades since the passing of that law, farm household income has certainly risen to be comparable with incomes in other sectors. However, as is discussed in more detail in appendix C, this increase is attributable only partly to the effect of government support measures. By far the greater proportion of the increase in farm household incomes can be attributed to the growth in income derived from non-agricultural sources. While the average income per person in farm households in 1981 was above the national average income, in the case of farm households *totally* dependent on farm-generated income the average income per household was below the national average. This would appear to indicate that agricultural support policies pursued by successive Japanese governments have had only limited success in their objective of achieving income parity between households in agriculture and other sectors of the economy.

It is also noteworthy that the average size of rural holdings has changed relatively little in recent decades, growing from about 1.0 ha in 1960 to 1.1 ha in 1979. Hence, farm amalgamation has had only a limited role in ensuring reasonable parity

between the incomes of farm and non-farm households. Instead, off-farm income has played a greater role in adjustment. Trends in and factors influencing the size of farms in Japan are discussed in more detail in appendix D.

2.3 Price stability

The objective of price stability has been one of the basic tenets of post-war Japanese agricultural policy. In the Agricultural Basic Law of 1961, for example, Article 11 stated in part that 'the state is to take whatever measures are needed to stabilise prices of important agricultural products as part of wider measures to compensate for the disadvantages arising from prevailing conditions affecting production and trade in agriculture, and in doing so is to take into consideration conditions affecting production, demand, supply, price levels and other economic factors'. The notion that prices be stabilised still seems to be given considerable weight by Japanese policy makers over 20 years later (see for example, Okawara 1983).

Such concern about price stability may provide much of the explanation for the extensive use of quantitative controls over imports. In particular, with effective quantitative restrictions on imports, the domestic prices of commodities can be determined largely independently of either the levels of or movements in prices on international markets.

2.4 Rural communities

The effect of agricultural policies on rural communities and on the rural environment is a matter of considerable importance to Japanese policy makers. In Japan, many people, even among urban dwellers, feel a strong attachment to the land, and rural communities have great cultural and traditional significance. In other words, the mere existence of a rural environment and rural communities in Japan is sufficient to provide some external benefits to Japanese society. Against that background, the support given to Japanese agriculture is often

viewed as playing a useful role in helping to maintain the size and vitality of the rural environment and rural communities.

2.5 Protection: the political dimension

It is a longstanding feature of Japanese post-war politics that voters in rural and semi-rural constituencies have voting power disproportionate to their numbers because the Government has failed to reapportion seats in the Diet to take account of urbanisation (Coyle 1986). Hence, there is obvious motivation for all political parties in Japan to provide more support to farmers than might otherwise be the case.

Although there is some expression of consumer dissatisfaction with high food prices, consumer groups are generally poorly organised and lack political influence compared with the rural sector. Almost all farmers belong to one of the agricultural co-operative organisations (Nokyo), which are further organised into a single national Central Union of Agricultural Cooperatives (Zen-chu). The operations of the co-operatives range from bulk handling of agricultural products to financial services and consultancy and are discussed in detail by G. George (1977) and the Central Union of Agricultural Cooperatives (1978).

Nokyo's operations extend into virtually every aspect of the farm sector. Moreover, because of its legal status as a statutory organisation the Government has allocated to it a range of tasks of a semi-administrative nature, mainly in relation to the distribution and storage of farm commodities, payment of subsidies to farmers, administration of support measures and assistance in areas such as land improvement and increasing the scale of farm management. Nokyo also represents farmers in policy discussions with the Government. Its legal integration into the system of agricultural administration and advisory councils has entrenched its position within the agricultural policy making process and given it direct access to the key decision

making groups within the Government and the bureaucracy.

Nokyo's influence with the farming community also provides the organisation with its own extensive and independent power base and has enabled it to become an electoral force in its own right. Nokyo is able to mobilise electoral support on behalf of members and executives of the organisation seeking political office in the Diet (as direct representatives of Nokyo interests) as well as for a wider group of politicians, mainly standing for rural or semi-rural seats, who are regarded as being sympathetic to the interests of farmers (and Nokyo). While a majority of these politicians belong to the Liberal Democratic Party (LDP), support is also extended to members of other parties who are considered to be sympathetic to Nokyo aims and interests. Nokyo officials also represent their organisation directly in meetings of Diet and party policy groups, while personal contacts between party and Nokyo leaders also occur at the highest levels. In summary, Nokyo is a considerable political force which exercises its political leverage through all available channels and access points into the policy making process as well as through mass mobilisation activities which it mounts in the public arena (George and Saxon 1986).

Legislation embodying agricultural policies (apart from those which are particularly controversial) is drafted within the Ministry of Agriculture, Forestry and Fisheries, taking into account directives in other relevant legislation such as the Agricultural Basic Law. The draft legislation is then forwarded to the Policy Affairs Research Council of the Liberal Democratic Party for consideration by its Agriculture, Forestry and Fisheries Division. The Division consists of LDP Diet members with an interest in rural policy. If approved by the Division the draft legislation is then sent back to the Ministry through the Policy Affairs Research Council and the LDP Executive. While this procedure is in progress, if there are other ministries interested in the legislation, officers of the Ministry of Agriculture, Forestry and Fisheries discuss it with the relevant officers of those ministries. If the

policy proves acceptable when this consultation process is completed, it is submitted to cabinet and, if approved, it is then introduced into the Diet.

2.6 Costs of protection

The Bureau in its 1981 report noted that Japanese society was becoming very gradually more aware of and critical of the fact that it was bearing some cost as a result of agricultural protection. However, there still seemed to be little appreciation of the magnitude of that cost. It is against this background that a number of recent studies have attempted to quantify the costs of Japanese agricultural protection to Japanese consumers and taxpayers.

For example, O'Mara, Knopke and Roberts (1981) examined the cost of protection from three perspectives:

- the transfer of income from consumers to farmers as a result of consumers paying higher prices for their products;
- the transfer of income from taxpayers to farmers in the form of direct assistance such as input or production subsidies; and
- the decline in total real income accruing to the economy as a result of producers and consumers facing distorted prices and thereby making incorrect decisions about the supply of and demand for agricultural commodities, leading to the inefficient use of resources.

Their estimate of the total cost borne by the non-agricultural sector of the Japanese economy in 1978 is \$A26 300m. The efficiency loss, based on conservative assumptions about the responses of producers and consumers to changes in agricultural prices, was estimated at \$A2534m, equivalent to 0.3 per cent of national income in 1978. The remainder, \$A23 700m (2.8 per cent of total Japanese income in 1978 or 55 per cent of the total value of agricultural production), represents a transfer of income to the agricultural sector from Japanese taxpayers and consumers.

Bale and Lutz (1981) estimated a more substantial efficiency loss of US\$6000m for 1976, with protection of the rice industry contributing about US\$3900m to the total.

These authors also estimated the average loss to consumers and taxpayers per dollar transferred to rural producers to have been \$2.58 in Japan, compared with \$1.50 in the European Community and \$1.38 in the United States. Hence, for every \$1 of protection given to Japanese farmers, consumers and taxpayers lost \$2.58, not including the efficiency losses caused by the taxes raised to finance farm subsidies.

In a later study, Tyers and Anderson (1985) reported the results of simulations of the effects of two scenarios on national economic welfare in a number of countries. One scenario postulated a situation where protection rates in East Asia (Japan, the Republic of Korea and Taiwan) continue to grow but at only half the average rate in the 1970s. The other scenario assumed that the rates of protection in East Asia decline by 25 per cent from the 1979-80 level during the period 1981-85 and remain constant thereafter. The results of the simulations indicated that East Asia would gain substantially from a partial liberalisation of its import regimes compared with a situation of continued growth in agricultural protection. The most substantial benefits would accrue, however, to Japan where it is estimated that the present value of the net gain in economic welfare would be more than US\$2000 per person.

In another recent study, Saxonhouse (1986) examined, among other things, the intersectoral effects of Japanese and US protection, showing how these benefit Japanese agriculture and US manufacturing at the expense of Japanese manufacturing and US agriculture. In the case of Japan, Saxonhouse estimated that, while removal of US and Japanese tariffs and non-tariff barriers would lead to a sharp (50.2 per cent) contraction in employment in the agricultural sector, employment would expand in virtually all manufacturing industries, especially iron and steel and textiles.

Impact on international trade

Although Japan's agricultural protectionism has generally been used to

further domestic objectives, it has had very important international consequences. It is the recognition of these international consequences that has encouraged some of Japan's trading partners to seek agricultural policy reform within Japan. Similar pressure has, of course, been mounted against, for example, the Common Agricultural Policy of the European Community (BAE 1985).

The Food and Agriculture Organization undertook one of the most extensive global studies of protectionism (FAO 1981), with other important contributions being made by Valdés and Zietz (1980) and Anderson and Tyers (1983). For wheat, coarse grains and beef, the results of the FAO and the Anderson and Tyers studies are similar, with an estimated increase of the order of 20 per cent in world market prices if world agricultural protectionism were removed completely. The study by Valdés and Zietz estimated a smaller, but still significant, increase in world prices if world agricultural protection was reduced by 50 per cent.

In a more recent study, Tyers and Anderson (1985) estimated the effects of grain and meat policies of three of the market economies in the East Asian region (Japan, the Republic of Korea and Taiwan) on international prices and trade in these products. The results of the study indicated that these policies, while raising prices and reducing price instability within those countries, have also:

- depressed international prices for coarse grains and non-ruminant meat by 2-3 per cent, for rice by 6 per cent and for ruminant meat by 9 per cent;
- increased the instability of international prices for rice, wheat and ruminant meat by about 15 per cent;
- reduced world trade in rice and meat by 5.7 Mt and 2.2 Mt, respectively (that is, by about 45 per cent and 55 per cent, respectively); and
- reduced economic welfare enormously in East Asia and considerably in the major exporting regions or countries of Australasia, North America and Thailand (although providing some benefit to other food importing countries).

3. The macroeconomic environment and its implications for protection

3.1 Recent developments

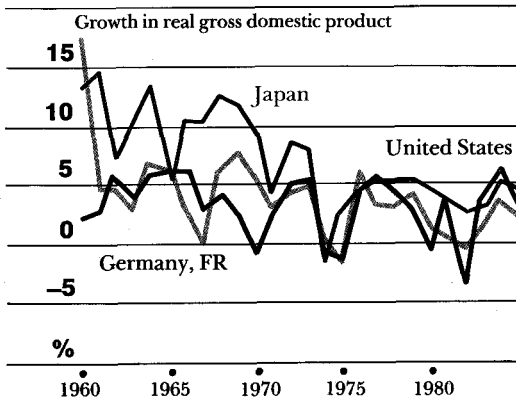
Japan's macroeconomic environment has changed substantially during the 1980s. These changes will be outlined here and considered in the context of some major developments occurring in the world's two other major economies, the United States and the Federal Republic of Germany (West Germany). The changes in the macroeconomic environment in Japan stand in stark contrast to the relatively unchanged arrangements for marketing agricultural commodities and for protecting Japanese agricultural industries (as noted previously and outlined in appendix A).

The rates of economic growth in Japan during the 1980s, while among the highest of the developed economies, have been somewhat slower than the rates achieved during the 1970s and quite markedly slower than the growth rates of the 1950s and 1960s (figure A). Similarly, during the 1980s, Japan's unemployment rate has risen, although it remains low relative to the rates in many other developed economies (figure B). Another notable change has been the generally low inflation

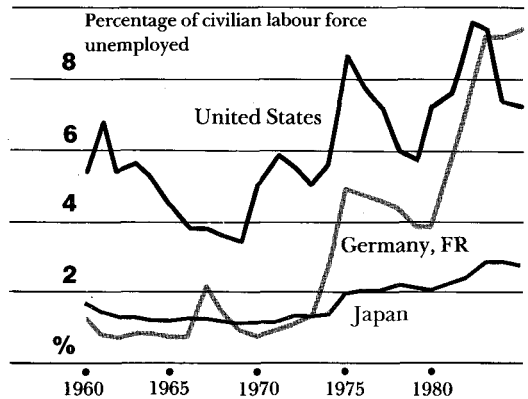
rate during the 1980s compared with the 1970s (figure C).

Growth in net exports has traditionally been an important source of economic growth in Japan. In figure D, annual growth rates of gross national product are contrasted with the growth rates of gross national expenditure, the latter often being referred to as 'aggregate absorption'. In those periods in which the rate of

A Economic growth rates



B Unemployment rates

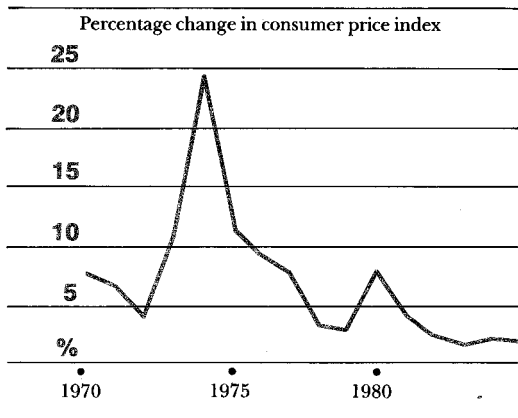


growth of gross national product exceeds (falls short of) the rate of growth of absorption, net exports make a positive (negative) contribution to economic growth equal to the difference between the two series. It is clear from figure D that gross national product has grown more rapidly than absorption in Japan during the 1980s. This has been reflected, in turn, in a rapid increase in Japan's current account balance (see figure E); the analogue is that capital has been exported by Japan to the rest of the world.

The restrained rate of growth of absorption during the 1980s also has implications for Japan's real exchange rate — the ratio of the price of traded goods to the price of non-traded goods in Japan. If

the demand for non-traded goods grows more slowly than the supply of non-traded goods (and other factors are unchanged), some downward pressure is placed on the price of non-traded goods relative to the price of traded goods in order to maintain equilibrium in the non-traded goods sector. A fall in the relative price of non-traded goods helps to preserve equilibrium in the non-traded goods sector in the face of restrained growth in absorption by encouraging a *switching* of demand away from traded goods to non-traded goods and by encouraging a movement of surplus resources out of the non-traded goods sector. In the case of Japan, it can be seen from figure F that there was a

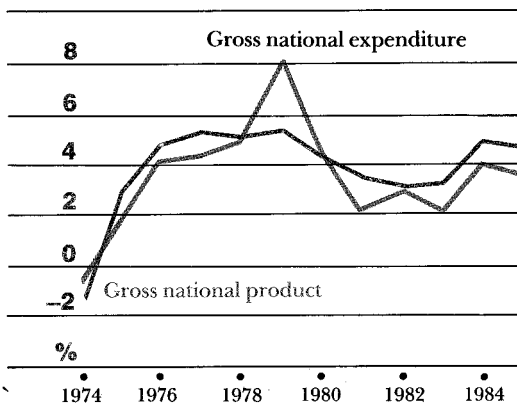
C Japan's inflation rate



downward trend in its real exchange rate over the period to mid-1985 — that is, a decrease in the price of non-traded goods relative to traded goods. (For some further discussion of the theoretical bases of issues surrounding the real exchange rate, see, for example, Salter 1959, Dornbusch 1980 and O'Mara, Wallace and Meshios 1987.)

Of course, Japan is not the only country among the major world economies experiencing a growing imbalance in its current account during the 1980s. As in Japan, current account surpluses have become increasingly prominent in West Germany, and a rapidly growing current account deficit has emerged in the United States. It can be seen from figure E that the current account deficit in the United States

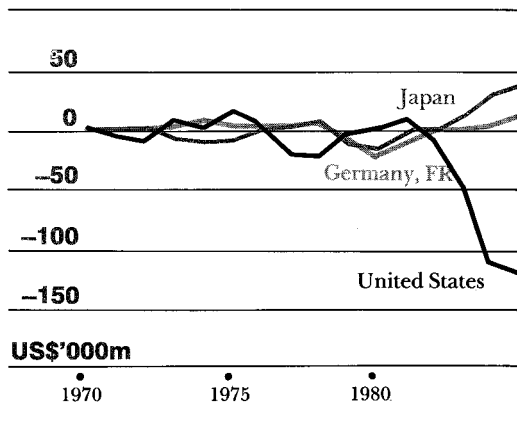
D Real economic growth in Japan



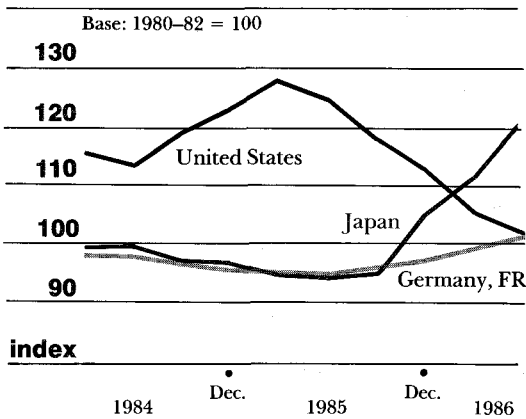
is a similar size to the combined surpluses of Japan and West Germany. In other words, Japan and West Germany have emerged as the two major net savers among the developed economies, with much of that surplus being exported to the United States to make up the shortfall of savings in that country.

By the mid-1980s, the sizes of these current account imbalances in the world's major economies were being viewed with increasing concern in the world financial community — see, for example, Morgan Guaranty Trust Company of New York (1985, 1986a) and Long-Term Credit Bank of Japan Ltd (1986). While current account imbalances and the corresponding capital flows are an integral part of international financial relations, there was

E Current account balances



F Real effective exchange rates



an emerging consensus that these had increased in size to the point where they may pose some threat to future world economic stability.

In response to such concerns, some co-ordinated policy actions were initiated by Japan, the United States and West Germany during 1985 and 1986, with co-operation from France and the United Kingdom (see, for example, OECD 1985, 1986a). In principle, two basic changes are required if the current account imbalances are to be reduced to more acceptable levels while maintaining equilibrium in the non-traded goods sectors of the respective economies. First, and most fundamentally, absorption needs to be brought more closely into line with gross national product in each country — a change that implies a relative increase in absorption in Japan and West Germany and a relative decline in absorption in the United States. Second, the increase in absorption in Japan and West Germany, with other factors unchanged, would need to be accompanied by an increase in the price of non-traded goods relative to traded goods — in other words, by a real appreciation of the exchange rate — in order to prevent the emergence of excess demand for non-traded goods. Similarly, the decline in absorption in the United States would need to be accompanied by a real depreciation.

Intuitively, it may be tempting to consider a relaxation of restrictions on imports as an alternative means by which

Japan could reduce the imbalance in its current account. However, while such an approach would foster a more efficient use of resources within Japan and would reduce existing distortions to world trade patterns, it would not reduce Japan's current account surplus unless the disparity between absorption and gross domestic product were reduced. Rather, resources would move out of Japan's inefficient import competing industries and into either other more efficient import competing industries or export industries, leaving the overall current account balance largely unaffected. This issue is discussed further in, for example, Saxonhouse (1986).

It can be seen from figure F that substantial progress was made during 1985 and 1986 toward the achievement of the second of the required changes outlined above — major changes of the real exchange rates of the three economies. In particular, both Japan and West Germany experienced marked real appreciations during this period while the real value of the US dollar fell sharply.¹ Co-operation between the major economies, taking the form of, for example, actual and threatened direct intervention in foreign exchange markets and a more significant relaxation of monetary policy in the United States than elsewhere, probably made a substantial contribution to this outcome.

To date, however, much less progress seems to have been made in the major economies toward achieving the more fundamental requirement — a reduction in the disparity between gross domestic product and absorption. In Japan, a moderate stimulus to absorption was provided by a supplementary budget

¹ It is widely recognised that measures of the real exchange rate obtained, as in figure F, using wholesale price indexes as deflators may not accurately depict movements in the ratio of the price of traded goods to the price of non-traded goods — see, for example, Shann (1986). Nevertheless, given the sizes of the real exchange rate movements since early 1985 measured in this way, it is improbable that any such bias would challenge the existence of substantial downward pressure on the yen-denominated price of traded goods relative to the price of non-traded goods within Japan.

announced in September 1986. The fall in world oil prices during 1986 and the associated increase in the real income of Japanese households also provided some stimulus to consumption expenditure. However, despite these stimuli, it is widely expected that economic growth in Japan in the 1986 fiscal year (ending 31 March 1987) will fall well short of the official target of around 4 per cent. In other words, the increase in absorption which has occurred to date probably warranted a real appreciation significantly smaller than that which occurred during 1985 and 1986 and this mismatching of the relative sizes of these changes has been reflected in an adverse effect on economic activity.

The Advisory Group on Economic Structural Adjustment for International Harmony (1986) in its recent report (discussed further in chapter 4) took a medium term perspective and recommended a substantial restructuring of the Japanese economy, with greater reliance being placed on domestic demand rather than on net exports as a major source of economic growth. However, no specific recommendations were made in the report about either the extent or the timing of such changes. Further, it seems that, as yet, no formal decision has been made by the Japanese Government as to whether the general thrust of the recommendations will be adopted. A similar situation seems to have emerged in West Germany, where no formal systematic strategy has yet been adopted to increase significantly the rate of growth of absorption over the medium term.

Of the three major economies, only the United States seems to have a formal strategy in place which could, at least in principle, reduce the gap between absorption and gross domestic product over the medium term. In particular, the Gramm–Rudman–Hollings legislation, although declared unconstitutional in part, is likely to result in a gradual but significant slowdown in the rate of growth of government expenditure and in the size of the federal budget deficit over the medium term.

In general, if absorption is not adequately increased in Japan and West

Germany, the present imbalances in their current accounts may not be reduced significantly within a reasonable period. Further, without an adequate increase in absorption, the recent changes in real exchange rates may well prove to be inconsistent with maintaining equilibrium in the non-traded goods sectors of the respective economies over the medium term. In that event, the new real exchange rates may prove to be unsustainable over the medium term.

3.2 Implications of the macroeconomic changes

Two points that have been made in this paper are, first, quantitative import restrictions continue to play a major role as a device for protecting Japanese agricultural industries and, second, Japan's real effective exchange rate has increased markedly since 1985. The interaction of these two factors has major implications for the costs imposed on Japan's economy by its own agricultural policies and for the extent of the distortion caused to world trading patterns.

The effects of the interaction of rigid quantitative restrictions on imports and an appreciating real exchange rate have been discussed extensively in the literature — see, for example, Crowley, O'Mara and Campbell (1983). For the purposes of this paper, it is sufficient to summarise the main conclusions of such analyses.

First, with other factors unchanged, an appreciation of the real exchange rate results in an increase in the level of effective protection provided by the quantitative import restrictions. This, in turn, increases the income transfers and resource misallocation associated with those import restrictions. Second, given that some underlying structural change in an economy (for example, an increase in absorption relative to gross domestic product) requires a real appreciation, the size of the real appreciation needed is greater if some import competing industries are protected by rigid quantitative import restrictions. A corollary of these two results is that, in the

presence of a real appreciation and with at least some import competing industries protected by rigid quantitative import restrictions, the burden of adjustment is borne more by exporting industries and by any import competing industries which are unprotected or protected only by a tariff on imports.

Applying this analysis to Japan, it seems highly probable that, because of the marked real appreciation which has occurred since 1985, the sizes of both the income transfers and the resource misallocation associated with Japanese agricultural protection are now much higher than, for example, the estimates for 1978 made by O'Mara et al. (1981), discussed previously. Some estimates of the *increase* in income transfers from Japanese households to the farm sector resulting from the real appreciation since September 1985 are set out in appendix E. The estimates are, by necessity, only rough approximations. In general, it seems that the recent increase in the income transfers was equivalent to 3–8 per cent of the total expenditure of a representative Japanese household, or about 11–29 per cent of its expenditure on food.

If Japan were to place significantly greater emphasis on absorption than on net exports as a source of future economic growth, thus helping to maintain much or all of the recent real appreciation, then considerable adjustment pressure would be borne by Japanese export industries over the medium term. The above analysis clearly implies that both the proportion of the real appreciation that would be maintained and the adjustment pressure that would be borne by export industries are greater in the presence of rigid quantitative restrictions on imports.

Finally, the recent increase in the level of effective protection afforded Japanese agricultural industries is likely to have been reflected in an increased distortion of world trade patterns. In particular, Japanese agricultural imports are likely to have been less than they would have been under a more liberal trading policy, while Japanese exports are also likely to have been less because of the additional impost on export industries. Given the size of the

Japanese economy and its importance to world trade, these additional distortions may have been sufficient to place some downward pressure on the prices of agricultural commodities relative to manufactured goods on world markets. This would imply declines in the terms of trade not only of some relatively highly developed economies, such as Australia and New Zealand, but also of many of the world's less developed economies.

4. The politics of agricultural protection

Commitment to agricultural protectionism is very strong in present-day Japan, and while there seems to be little prospect of any significant change in this situation in the short term, there is some potential for gradual change in the longer term. Factors such as the contraction of the rural sector, the weakening of the rural lobby's power base and changes in attitudes toward food security could lead eventually to a reduction in the level of agricultural protection in Japan.

4.1 Importance of the rural electorate

As already mentioned, rural voters have a disproportionate degree of political power in the Diet. This situation was examined by the Supreme Court of Japan following the December 1983 general election, and the existing electoral system was subsequently ruled unconstitutional (Michisada 1985).

When the electoral districts were established in 1950, the vote value gap — that is, the number of representatives per voter in one district compared with the number in another district — was less than 2:1. In 1985 the gap was 4.4:1, despite the Supreme Court ruling that a ratio of 3:1 or higher is unconstitutional. Before the July 1986 general election, a redistribution of seats was effected in the House of Representatives, with seven seats being taken from rural districts and eight being given to metropolitan constituencies (Oriental Press Service 1986). While this redistribution does not represent a major electoral reform, it has set a precedent for opposition parties to initiate changes in the future. For example, malapportionment is also a feature of the Japanese Upper House and it is possible that this may be brought to the attention of the Supreme Court.

However, even if such reform were to lead eventually to a change of government

in Japan, the implications for Japanese agricultural trade policy are likely to be minimal. A. George (1981) has contended that the opposition parties are as much in favour of agricultural protection as is the ruling Liberal Democratic Party.

Some commentators, in fact, have questioned the importance of the role played by politicians in planning and implementing government policy in Japan. Akira (1981), for example, maintains that, while politicians in Japan are more powerful than bureaucrats, the political role of the bureaucracy is much more pronounced in Japan than in many other political systems. He identifies the Higher Civil Service as a group which has a substantial influence on the direction of government policy. The important political role of the Higher Civil Service in Japan is increased by the fact that many top political positions are filled by former bureaucrats. The agricultural policy of the Liberal Democratic Party, for example, is determined largely by politicians who either hold or recently have held high ranking positions in the bureaucracy and various agricultural policy making committees. In addition, Higher Civil Servants, upon retirement, often take up influential positions in public corporations and private businesses. Further, because Japanese cabinet ministers tend to have relatively brief terms of office, matters such as policy formation and personnel assignment are usually entrusted to senior bureaucrats (Akira 1981).

In a comparative study of political elites carried out by the University of Michigan (Akira 1981), it was revealed that in Japan both politicians and bureaucrats perceive the civil service as being more influential than the political parties or parliament in developing public policy. In addition, the civil service was identified as being more important in Japan than in the United Kingdom, West Germany or the

Netherlands. It would appear, therefore, that the bureaucracy plays a central role in Japanese policy formulation — a factor which should be borne in mind in any examination of the decision making process.

The erosion of the farm lobby's power base is another important recent development which needs to be examined. A. George (1986) has argued that the farm lobby in Japan is showing signs of weakening for two reasons. First, as increasing numbers of farmers participate in off-farm work, their occupations and political loyalties become more varied. Consequently, they are less amenable to mass mobilisation by agricultural leaders and less willing to support the campaigns of Zen-chu. Second, there are tensions between full-time and part-time farmers, which is an additional source of disunity in the farm lobby. According to George's analysis, the small number of relatively efficient full-time farmers are becoming increasingly critical of the large number of part-time farmers who supplement their off-farm income with high agricultural support prices for their farm commodities. A further source of conflict is the tendency of part-time farmers to retain their farm land even in situations where the bulk of their income is earned off the farm. It has been suggested that this prevents the more efficient full-time farmers from buying up the additional farm land required to achieve economies of scale and thereby increase farm productivity. George's final assessment is that, while there are signs of weakness and divisiveness within the farm lobby in Japan, rural politicians and bureaucrats may still be sufficiently powerful to prevent any rapid reform of Japanese agricultural trade policies.

Indeed, it seems clear that before any significant reform of these policies can occur there will need to be a change in attitudes to food security. Currently, the official view is that agriculture is vital to the nation because of its role in overall food supply, and agricultural protection is considered necessary to ensure the preservation of the agricultural sector. In recent years there has been a reduction in the ability of the Japanese Government to

deliver agricultural protection to the same extent as in the past. One of the principal reasons for this has been the fiscal stringency stemming from a succession of budget deficits (large by Japanese standards) which has restricted government expenditure. This has resulted in a reduction in agricultural subsidies and the freezing of agricultural support and stabilisation prices. Another reason has been the agreements to increase imports (of, for example, beef) entered into by the Japanese Government with overseas suppliers, such as the United States and Australia, which have reduced the degree of flexibility available to it in setting stabilisation prices (for example, for beef) (A. George 1986).

Perhaps even more important than the financial and international restraints on the ability of the Japanese Government to provide protection, however, is what seems to be a decline in the political will to supply such protection (A. George 1986). It appears that, for a number of reasons, the LDP Government in recent years has become somewhat less responsive to pressure from the farm sector. Among the more important reasons for this has been the weakening in the power of the farm lobby, the decline in the farm vote and the decline in the dependence of the Liberal Democratic Party on the farm vote. The large majority received by the party in the 1986 election is also significant since, traditionally, the greater the strength of the party in the Diet, the more adventurous it tends to be in its agricultural policies (A. George 1986).

4.2 Attitudes to food security

In the late 1970s and early 1980s there was growing concern that a global food crisis was developing, as world food production was projected to grow at a slower rate than world consumption. These assessments were expressed in two major studies — one by the US Council on Environmental Quality and US Department of State (1980) referred to as Global 2000 and the other by the Food and Agriculture

Organization (FAO 1981) referred to as *Toward 2000*.

Since the publication of these studies, however, there has been a marked turnaround in the world agricultural situation, with the prices of many agricultural products falling in real terms to levels which are low by post-war standards. There are a number of factors, affecting both demand and supply, which help to explain why the projections in these two studies have not been realised and are increasingly unlikely to be achieved over the balance of the projection period (that is, to 2000). These factors are discussed in detail by Stoeckel (1985), so it is proposed to provide here only a brief summary of the main arguments.

On the demand side, it appears that the rates of population growth used in the studies are too high, largely because they do not adequately reflect the declining birth rates in a number of the more important developing countries (see Everstadt 1980). In addition, it seems that the projected growth in income and the consequent effects on demand for food were overestimated. On the supply side, the potential for increases in yields and overall production as a result of technological developments (such as new high yielding grain varieties, and improvements in fertilisers and irrigation techniques) and in response to changes in agricultural prices appears to have been underestimated in both studies.

A number of more recent studies have markedly different conclusions from those in *Global 2000* and *Toward 2000*. Essentially, the findings of the recent studies are that the outlook to the end of the century is for a continuing decline in the real prices of agricultural products and, while there will be short term fluctuations, they will occur around an overall downward trend (World Bank 1982; Bale and Duncan 1983; Johnson 1983; US Department of Agriculture 1983; Stoeckel 1985).

It seems clear, then, that the consensus of current opinion on the outlook for agricultural commodities in the medium to long term is that world food supplies are likely to exceed consumption, resulting in

downward pressure on world food prices. Given the likelihood of the continuation of abundant, relatively cheap, food supplies on world markets and the gradually declining influence of farm lobby groups, the Japanese Government may reappraise its existing policies with respect to food security.

In this regard, it should be noted that the national preoccupation with food security has diminished slightly over the past decade. In a public opinion poll conducted in April 1983, 61 per cent of those surveyed favoured food self-sufficiency and 34 per cent thought that Japanese consumers should have access to less expensive imported foodstuffs (George and Saxon 1986). These figures differ from the 71 per cent and 17 per cent, respectively, recorded in 1975 and indicate that Japanese consumers today are somewhat less willing to pay a premium in order to guarantee a secure supply of domestically produced foodstuffs than they were a decade ago. It is possible that this gradually increasing opposition to the current inward looking approach to food security will receive some stimulus from the fact that Japanese consumers have not been permitted to receive the full benefit of the recent marked fall in world food prices.

As discussed earlier in this paper, the effect of the recent appreciation of the yen has been translated by agricultural protection arrangements into an increase in the income transfer from Japanese consumers to the farm sector rather than into a reduction in food prices. Similarly, the declines in world prices of the major agricultural products have not been passed on to Japanese consumers in the form of lower domestic food prices but have been translated into increased income transfers from consumers to farmers. Estimates of these income transfers and the procedure employed to obtain those estimates are set out in appendix E. Briefly, it is estimated that, depending on the assumptions used, the *increase* in the income transfers during the period September 1985 to August 1986 ranged from the equivalent of about 3 per cent to 7 per cent of total household expenditure.

4.3 The Maekawa report

In the light of the significant changes in the world economic environment in the early 1980s, Prime Minister Nakasone set up a 17-member task force in October 1985 under the chairmanship of a former governor of the Bank of Japan, Haruo Maekawa. The role of this task force, called the Advisory Group on Economic Structural Adjustment for International Harmony, was to examine possible medium to long term policy measures for the restructuring of the Japanese economy.

The report of the Advisory Group (commonly referred to as the Maekawa report) was submitted to Prime Minister Nakasone in April 1986. In the report, the Advisory Group drew attention to the steadily escalating surpluses in the Japanese current account and stated that a continuation of such large imbalances would create a critical situation 'not only for the management of the Japanese economy but also for the harmonious development of the world economy' (Advisory Group on Economic Structural

Adjustment for International Harmony 1986). It then went on to indicate that the Government should, as a medium term policy goal, reduce the imbalance in the current account by implementing structural adjustment policies designed to reduce the export orientation of the Japanese economy. These recommendations were formulated bearing in mind three fundamental principles — the policies should be based on market principles; they should be considered within a global perspective; and, since the process of structural adjustment is essentially long term, policy measures should be applied continuously and be viewed within a long term perspective.

The essential thrust of the Maekawa report is that the Japanese economy should be restructured so as to make it less dependent on export markets and more reliant on domestically generated growth. The body initially accorded the responsibility for overseeing the implementation of the Maekawa report recommendations was the Promotion Headquarters Group, headed by the then

Major policy prescriptions of the Maekawa report

1. Expand domestic demand by reforming housing policy, improving and extending measures to promote housing, stimulating private consumption and encouraging social infrastructure development by local government authorities.
2. Transform the structure of both primary and secondary industries by encouraging structural adjustment in the industrial sector, substantially reducing domestic coal production, encouraging direct investment overseas and foreign investment in Japan, encouraging basic restructuring in the agricultural sector and improving market access for imported agricultural products (except 'basic farm products').
3. Improve market access for manufactured imports.
4. Stabilise international currency values through, among other things, international co-operation in exchange rate policy, co-ordination of economic policies between the major industrial countries and 'internationalisation' of the yen (including further liberalisation of capital and financial markets).
5. Promote international co-operation and increase Japan's contribution to the world economy by expanding imports from developing countries, assisting with the debt problems of developing countries, promoting economic and technical co-operation and participating in the multilateral trade negotiations under the General Agreement on Tariffs and Trade.
6. Improve the management of fiscal and monetary policies by improving measures for appropriating fiscal resources, mobilising private sector resources, further deregulating financial markets, reforming the tax system and making the management of the monetary system more flexible (consistent with maintaining a stable currency).
7. Establish arrangements for implementing recommendations 1-6 and provide the necessary and appropriate follow-up action.

Chief Cabinet Secretary. This group was superseded in July 1986 by a new body, the Government – Ruling Party Joint Headquarters for the Promotion of Economic Structural Adjustment, which is headed by Prime Minister Nakasone.

While the Maekawa report encompassed a comprehensive range of policy issues, perhaps the most important consideration from an Australian viewpoint was the acknowledgment of the need for Japan to promote agricultural policies more in line with what was termed 'an age of internationalisation' and of the need for greater reliance on market mechanisms. The Advisory Group also recognised the need for greater international co-ordination of policies in the field of structural adjustment as well as in other areas, in particular the strengthening of the GATT system together with its rules. It also called for the early initiation of policies for structural reform.

While the overall thrust of the Maekawa report appears sound there are several aspects which provide cause for some concern. One of these is the fact that the report fails to address the relationship between the stated objective of reducing the surplus on current account and other key economic objectives. What is the likelihood of modifying the policy of self-sufficiency in the agricultural sector? And, how is it planned to reconcile the apparently contradictory goals of maintaining farm incomes comparable with those of urban workers while reducing agricultural prices to international levels?

Another point of concern is that the report fails to consider the mechanism of change — that is, the means by which the proposed changes would be implemented. There is also no discussion of either the scale or the timing of the proposed changes. This is a shortcoming which attracted adverse comment in Japan itself where, at the time of the release of the report, a number of Japanese 'observers', while generally approving the structural reforms outlined in the report, expressed disappointment at its failure to recommend specific measures to put its proposals into effect (Matsuda 1986).

The recommendation that the Japanese Government should strengthen measures aimed at stimulating overseas investment and expanding economic co-operation with developing countries is encouraging. However, it is important that, in implementing this recommendation, care is taken to avoid measures which could encourage the production of commodities either already or potentially in oversupply which could further depress prices and exacerbate instability in world markets.

The recommendations that could most directly affect countries such as Australia, if implemented, are those relating to the coal industry and agriculture. In the case of the coal industry the Advisory Group recommended that coal mining policies should be examined with a view to markedly reducing domestic output and increasing reliance on imports. On 7 November 1986 the Ministry of International Trade and Industry (MITI) Agency for Natural Resources and Energy announced its coal policy for the five-year period 1988–92. Under the terms of the policy, Japanese coking coal production will be phased out over the five-year period, while compulsory purchases of domestic steaming coal by electric power companies will fall from 12.9 Mt in 1986 to 9.7 Mt in 1991. However, the new domestic price for steaming coal has been set at ¥20 355/t (about \$A196/t at early 1987 exchange rates), which represents a substantial transfer payment from other Japanese industries to the coal industry (at least \$A5000m). In addition, the Japanese Government appears to be planning to increase direct assistance to the industry to about \$A1100m a year (Ries 1986).

If the Government implements the Agency's recommendation the Japanese steaming coal industry will receive an effective subsidy totalling more than \$A10 500m over the five-year term of the policy. The action actually taken by the Japanese Government in this instance, therefore, could provide an indication of its commitment to the structural change advocated in the Maekawa report, including that for agriculture.

In the case of agriculture, the Advisory Group acknowledges the constraints on

domestic production imposed by the supply of land and other factors and states that the Government should develop a clear perspective for the future of Japanese agriculture. It recommends that the Government work to improve the structure of the agricultural sector — in particular, that policies should focus on fostering 'core' farmers for the future. And, at the same time, price policies should be reviewed to make greater use of market mechanisms and to assist actively in the promotion of structural adjustment. It was also envisaged that, with the exception of 'basic farm products', efforts should be made to increase imports of agricultural products (including processed products) where there are marked discrepancies between domestic and world prices. In cases where products are subject to quantitative restrictions, efforts should be made to increase market access in line with the long term objective of opening up the Japanese market.

While the sentiments expressed in the report with respect to agriculture appear unexceptional, the recommendations are couched in general terms and do not discuss the specific measures which should be introduced in order to implement the proposals. There also needs to be some clarification as to who would constitute 'core farmers' and what their role would be, as well as an indication of the commodities to be included in the group 'basic farm products' which the report recommends should remain subject to protection. Another area of uncertainty is whether the measures for improving the structure of agriculture would be confined to trade liberalisation or whether they would also extend to adjustment within the agricultural sector itself.

Because of the vagueness of the report in certain areas it is difficult to assess the likely impact of the proposed agricultural reforms. In particular, it is difficult to make a realistic appraisal of how the proposed changes, if introduced, would affect Australian exports of agricultural products to Japan. It appears, though, that the issues discussed above do have the potential to limit the extent of any responses by the Japanese Government in

respect of its agricultural policies.

Agricultural exporting countries such as Australia would clearly benefit from the implementation of measures designed to bring about structural adjustment in the Japanese agricultural sector and provide greater access for agricultural imports. However, Japan would also benefit considerably. As already discussed, the rigidity of Japan's agricultural trading arrangements has largely negated possible beneficial effects on imports which could have flowed from the appreciation of the yen. It also seems reasonably clear that Japan's agricultural policies are not in its own long term economic interests. For example, costs to consumers have escalated and the channelling of resources into this relatively inefficient sector in Japan has diverted them from more productive economic activities.

In summary, the Maekawa report is a welcome expression of the growing awareness by the Japanese Government of the importance of increasing import access to its domestic markets. However, its potential impact is likely to be diminished significantly by the absence of a clearly defined program for specific and measurable reform, while the extent of the Government's actual commitment to implementing the recommendations contained in the report has yet to be demonstrated.

5. Alternative policy approaches

It seems that some very gradual move toward reforming agricultural policy in Japan may be occurring, even though little progress has been made to date. Hence, a crucial question to be addressed by Japanese policy makers now and in the future is how best to achieve, at least cost, the country's goals of food security, income parity across households, stable agricultural prices, and viable rural communities.

It is widely accepted in the literature that, in the absence of market failure, government intervention in the marketplace is not required to ensure that resources are used efficiently. Examples of market failure which may provide an economic rationale for government intervention include the existence of externalities, imperfect competition and economies of scale (Krugman 1983). It is also widely recognised that the economic effects of government intervention in the marketplace may differ markedly, depending on the protective device employed. Appendix F describes a number of instruments which either have been used or could be used in Japanese agriculture — import quotas, production subsidies, consumption taxes, tariffs and deficiency payments.

In brief, it is noted in appendix F that, unlike import quotas, tariffs do not necessarily prevent changes in commodity prices on international markets, or exchange rate changes, from flowing through into the prices paid by domestic consumers and received by domestic producers. More particularly, the greater use of tariffs rather than import quotas as a protective device for Japanese agricultural industries would help to ensure that any future falls in world food prices and/or appreciations of the yen did not result in higher rates of effective protection for Japanese agriculture. On the other hand, if world food prices were to rise in the future

or if the yen were to depreciate, the use of import quotas rather than tariffs could facilitate some decline in effective protection to Japanese agriculture, reversing the trend which emerged during the 1980s. In general, if import quotas were to be replaced by tariffs, care would need to be taken to ensure that unacceptably high levels of effective protection were not locked in by those tariffs. With respect to deficiency payments, it is noted that they do not directly restrict imports (unlike import quotas), nor do they interfere with the allocative decisions made by consumers (unlike both tariffs and quotas), which makes them an attractive instrument.

Clearly, a move toward a less interventionist agricultural policy (perhaps by replacing import quotas with tariffs and by making greater use of deficiency payments as interim steps) would generate major benefits for both the Japanese economy and the world economic community. However, it would not in itself necessarily ensure that the major objectives of Japan's existing agricultural policies would be met. Complementary policies aimed specifically at meeting those objectives at least cost would need to be introduced. Some of the options available to the Japanese Government in this regard are now discussed.

5.1 Food security

Because Japanese people place great value on the knowledge that their food supplies are secure, from an analytical viewpoint it could be argued that activities which enhance the perception of food security provide an external benefit to Japanese society. A sound economic case could thus be made for directly subsidising such activities. (The use of 'Pigouvian' taxes and subsidies in the presence of an externality is discussed in Baumol and Oates 1975.)

The production of food in Japan is clearly an activity which increases food security, and hence there may be some economic rationale for the Government to support that production directly. However, the theory dictates that any such support should take the form of a direct production subsidy (deficiency payment) rather than an import quota or tariff (see, for example, Bhagwati and Srinivasan 1983) and should not be open-ended. The rate of subsidy should be set so as to ensure that, at the margin, the subsidy reflects the value placed on the incremental increase in food security. Also, other activities which are perceived to increase food security should receive treatment similar to that given to domestic food production.

An example of an activity other than domestic food production which may increase Japan's food security is direct investment in agriculture in other countries which have a clear competitive advantage in agriculture.² This strategy has been tried by Japan in the past, with investments being made in farming enterprises in Thailand, Indonesia, Brazil and Australia. However, these projects were only a limited success, partly for technical reasons and partly because the Japanese firms making the investments were forced to sell their production at international prices (US Department of Agriculture 1981). There would seem to be a case for the Japanese Government to provide assistance to firms entering into foreign investment projects if such projects help guarantee Japanese food security. The investments could be made in several countries to minimise the impact of unfavourable seasonal conditions and could involve the purchase of storage facilities as well as farming operations. Government assistance could be provided through the taxation system or direct grants. It is unlikely that there would be large scale public opposition to such an initiative because agricultural co-operatives operating in Japan already receive favoured treatment under the taxation system.

It is not unusual for countries to maintain stockpiles of commodities judged to be of importance to national well-being.

The United States, for example, through the federal Department of Energy, maintains a stockpile of up to 750 million barrels of crude oil at public expense (the Strategic Petroleum Reserve). Japan could adopt a similar approach in the case of non-perishable foodstuffs. Because of the social benefits, the Japanese Government could justify setting up and maintaining stockpiles at taxpayers' expense or could subsidise the stockholding activities of private firms.

A further strategy which may increase Japan's food security is to make increased use of long term bilateral contracts for foodstuffs. As with direct investments, a portfolio of contracts with a number of different countries could be negotiated to minimise the likely impact of production shortfalls in any producing area. A related strategy and one which has been pursued to some extent by Japanese firms to guarantee grain supplies and/or to lock into favourable prices is to purchase futures contracts on commodity exchanges (Schmitz, McCalla, Mitchell and Carter 1981).

5.2 Income parity and price stability

One of the arguments used to rationalise government assistance to agriculture in Japan is that such assistance is necessary to maintain farm incomes at levels comparable with non-farm incomes. Most industrialised countries have this objective for their farm sectors — the notion that the benefits of economic development should be distributed on an equitable basis seems to have universal appeal. However, there are a number of important issues which need to be considered.

First, most of the income support provided to farmers in Japan is effected

² The term 'competitive advantage' is not to be confused with 'comparative advantage' which has to do with a country's resource endowment and trade pattern which would exist in the absence of market distortions. Competitive advantage refers to the ability of a country to supply a product at a lower price than competitors in the presence of government policies.

through producer prices which are set well above the prices ruling on international markets. However, the prices which farmers receive for their products are only one of several factors which influence their incomes. The net incomes farmers receive from their farm activities are determined by the prices they receive for their products, the resources they own or control, the prices they pay for their inputs, and the efficiency with which they produce their output. The productive efficiency of Japanese agriculture appears to be particularly important in this regard. For example, productivity in 1980, although much higher than in 1960, was still only around half that in the United States or Australia (Kawagoe and Hayami 1985).³ And productivity in Japanese agriculture is only about 25 per cent of that in Japanese manufacturing industry (Japan Institute of International Affairs 1985). Further, for the majority of farm households in Japan, off-farm income is a more important component of total earnings than is farm income.

Another major consideration is that, because income support for farmers is provided indirectly through artificially high commodity prices rather than through direct income supplements to needy households, much of the impact of the support on incomes has been capitalised into the price of agricultural land. In other words, much of the benefit of these support policies has accrued to those farmers who owned land at the time that the support policies were introduced. Some landowners who purchased part or all of their land after the introduction of the support policies have received little benefit, if allowance is made for the opportunity cost of their capital investment in land. However, such farmers may be adversely affected by capital losses on their land if the agricultural support is reduced. This is a classic example of the 'transitional gains trap' discussed by Tullock (1975).

Consideration may need to be given to providing compensation to some farmers, on welfare grounds, where such capital losses could cause undue hardship. It is also vitally important to guard against

creating further transitional gains traps through further increases in agricultural support. Finally, the extent of any capital losses could be minimised by encouraging some farmers to use their land for other activities — a point which is taken up further in this chapter.

A third issue is that, even in the absence of government intervention, rural and urban incomes would probably converge over time. In particular, resource movements would continue until wage rates — and ultimately income per person — in rural and urban areas converge. In Japan, labour is quite mobile as evidenced by the high proportion of farms operated by part-time farmers (see appendix C). This movement of labour from rural to non-rural employment should be seen as the natural outcome of decisions being made by farm households to allocate resources to obtain their best return. This development is not unique to Japan; it has also taken place in other developed countries, including Australia and the United States. What is important here from a policy viewpoint is that the incomes of farm households engaged full time in agriculture in Japan are less than the incomes of other households, indicating that the instruments currently in place have been less effective in achieving income parity than have been these natural adjustment mechanisms.

There are also arguments against the present support system on equity grounds. Since larger farms produce more output than small farms, more of the benefits from government intervention are captured by the operators of larger farms. Such farmers could be expected, on average, to enjoy relatively higher incomes and wealth, even in the absence of government support. For example, the larger farms in Japan can take advantage of economies of scale. Studies have shown, for example, that the cost of producing rice on small farms is three to four times as

³ Total productivity is measured as the ratio of the index of total output to the index of total inputs. Seventeen developed countries were compared on the basis of this measure and two other measures: output per worker and input per worker ranked last on all measures.

high as on large farms. In addition, in recent years, costs on farms of less than 1 ha have been increasing faster than costs on large farms (Japanese Institute of International Affairs 1984). This effect of support is very similar to that identified by the Bureau in its study of the effects of the Common Agricultural Policy of the European Community (BAE 1985).

The apparently perverse distributive effects of existing agricultural policies at the producer level seem to be reinforced by their effects on consumption. To the extent that consumers pay a higher price for farm commodities than they would in the absence of government intervention, the current policy is clearly regressive because low income households spend a higher proportion of their income on food than do high income households. This point takes on added significance because Japanese households spend a relatively large proportion of their disposable income on food. For example, in 1981, Japanese household expenditure on food, beverages and tobacco accounted for about 25 per cent of private final consumption expenditure, compared with less than 20 per cent in the United States (OECD 1983). Part of the reason the Japanese figure is so much higher is that food prices in Japan are well above those in most other developed countries.

The central point to emerge from this analysis is that interfering with market prices is an inappropriate means of achieving a redistribution of income. An overriding policy goal in Japan should therefore be to disconnect agricultural prices from this income distribution function, thus allowing prices to play their natural role — that of ensuring an efficient allocation of resources. To the extent that the distribution of income that would emerge under a system of market determined prices was considered inappropriate from a welfare or income parity viewpoint, some redistribution could be effected by imposing taxes and supplementing the incomes of needy households. This argument applies equally to the effects of the longer term change in relative prices as Japan moves to liberalise its agricultural policies and to the effects of

shorter term variability in commodity prices.

5.3 Social infrastructure

Land, like all natural resources, is an asset. It might be used for highways, urbanisation, manufacturing industry, agriculture or recreation.

With Japan's limited supply of land and high population there would seem to be considerable scope for diverting land which is currently used at high cost for agricultural purposes into housing, recreational and other non-agricultural uses. Some support for this view comes from a recent Japanese Government white paper on national life (Hotel Okura 1986). This paper reported that, even though Japan's living standards were comparable with or even superior to Western nations in terms of health, safety, consumption, employment and education, housing and social infrastructure in Japan was far short of that in other developed countries with comparable incomes. For example, Japanese houses have only about 60 per cent of the floor space of those in the United States, while the largest Japanese city, Tokyo, has only 2.1 m² of park per person, one-twelfth that of London, and one-seventh that of New York.

Because of the limited amount of land currently used for housing and recreational purposes in Japan, it is likely that using some of Japan's farm land for these purposes would represent an improvement in resource allocation. Moreover, the demand for such facilities is likely to continue to grow rapidly in line with growth in real incomes in Japan. Studies could be undertaken to estimate, as accurately as possible, the demand for land suitable for such non-agricultural pursuits. A mechanism could then be established, perhaps by relaxing existing zoning restrictions or by establishing a government agency, to allow that demand to be expressed in land markets.

Such a policy, besides improving the quality of life in Japan, may also result in improved economic opportunities for rural communities close to any newly established recreational facilities. For

example, the trend of educated young people moving from rural areas to the city might be reversed or lessened if new employment opportunities became available in rural areas. Further, the demand for land for these alternative uses should, if allowed to be properly expressed in the marketplace, minimise the fall in agricultural land values, at least in areas close to urban centres, as Japan's agricultural policies are liberalised.

5.4 Other issues

Several countries, particularly those with less developed economies, which traditionally have relied on primary commodities for their export earnings are

facing severe economic problems, partly because they have been denied unrestricted access to the markets of Western Europe and Japan. Because this restriction has led to income loss for the exporters, their ability to purchase manufactured goods from Japan and other industrialised countries is severely limited. It would seem, therefore, that Japan could benefit substantially if incomes in commodity exporting countries rose, since higher incomes would result in increased market opportunities for Japanese industry. For this to eventuate, however, Japan and the countries of Western Europe would need to follow a less interventionist policy in their agricultural markets.

Appendix A Protective arrangements in agriculture

Rice

Rice is a crop with great cultural significance for the Japanese people and is the single most important item in their diet. In recent decades the value of rice production has amounted to about 35 per cent of the value of all agricultural output and the area under rice is about half of the total area devoted to agricultural and fodder crops. Some authors, such as Timmer and Reich (1983) and Hillman and Rothenberg (1985), have argued that Japanese rice policy lies at the heart of the problems which countries such as the United States and Australia face in gaining access to the Japanese market.

Since enactment of the Agricultural Basic Law of 1961, and under the provisions of the Food Control Law of 1942, the supply of rice has been subject to strict control. All rice produced domestically other than that consumed on farms is acquired compulsorily by the Government through the Ministry of Agriculture, Forestry and Fisheries. Imports of rice are also controlled by that Ministry and are strictly limited.

The Government's effective control over imports and quantities purchased from growers and sold to consumers and its ability to hold stocks have enabled rice prices in Japan to be determined independently of world prices. The Government has pursued a policy of selling rice to consumers at a price below the price paid to rice producers but still well above world prices. The deficiency between purchase price and selling price is met from the government budget. In effect, a policy of income support for rice growers has been pursued by making transfers from consumers and taxpayers.

The basis adopted by the Ministry of Agriculture, Forestry and Fisheries to set prices to growers has been a cost and income compensation formula to reflect

costs of production and incomes earned in non-rural occupations. Given the importance of rice to farmers and the political influence of the rural sector, farm interests have been able to exert considerable pressure to ensure that rice prices paid to growers remain profitable.

Pricing policies and the productivity of the rice industry have ensured that rice production has been very profitable relative to production in alternative agricultural industries. After being a significant importer of rice in the 1960s, Japan became burdened with surpluses in the 1970s, which led to greatly enlarged budget outlays. Concerned about the budgetary implications of continued and growing surpluses the Government instituted a rice diversion scheme in 1971 to encourage some movement away from rice production to alternative production.

In spite of policies directed toward reducing production, rice has continued to be a principal agricultural product in the 1980s. Almost 60 per cent of Japan's farm households receive more than 60 per cent of their farm cash receipts from rice.

Notwithstanding measures to reduce production, including revisions to the original rice diversion scheme of 1971, rice surpluses and the corresponding budget outlays have continued to be of concern, prompting further action by the Government. Rice diversion measures were extended under the third phase of the Paddy Field Use Reorganisation Measures (1984–86) to include provisions for the disposal of rice by diverting stocks to domestic stock feed and other processing uses. Substantial amendments to the Food Control Law have been effected in an effort to make the whole structure of the rice industry more responsive to changing social and economic conditions which include some movement toward Western-style diets and the need to curtail budgetary outlays.

Although the Government wants to bring domestic supply and demand into balance it remains firmly tied to the basic principle that it should regulate the marketing of rice and other staple food items with the twin aims of ensuring stable supplies to consumers and providing income support for producers.

Wheat and barley

Japan once produced sizeable quantities of wheat and barley (BAE 1981). In the late 1940s and early 1950s, barley in particular was a major food item in Japan. However, production declined steadily throughout the 1960s and early 1970s before stabilising. In 1980 Japan was about 9 per cent self-sufficient in wheat and 15 per cent self-sufficient in barley (BAE 1981).

Domestic production since the early 1970s has been encouraged by raising the price of wheat and barley so that these crops are almost as profitable as rice. At the end of the 1970s, prices received by domestic producers for wheat and barley were three times higher than the average import prices. As part of the Government's program to reduce rice production, producers diverting rice land to wheat and barley production received an additional payment. This payment averaged more than the returns from the sale of those crops. However, it should be noted that wetland rice areas are unsuited to the production of wheat and barley unless extensive drainage works are undertaken.

Drainage imposes considerable costs since rice areas adjacent to drained land are likely to dry out to the extent that rice yields are greatly reduced. Therefore, it is not easy to encourage rice growers to divert some of their land from rice production to dryland production of crops such as wheat and barley unless a substantial financial inducement is offered.

Almost all wheat and barley produced is purchased by the Food Agency (BAE 1981) at prices substantially above import prices. The Food Agency sells grain to flour millers, feed companies, brewers and other processors at prices in line with import prices. The resulting deficit arising from these Agency transactions is financed by allocations from the government budget.

Quantitative import restrictions form an integral part of the price support system. The volume of wheat and barley imports admitted each year is determined by the expected shortfall between domestic production and market requirements. Import quotas for the year are allocated to individual millers and other processors on the basis of past purchases.

As a result of the continuing policies of price support and the implementation of the measures associated with the Paddy Field Use Reorganisation Measures, the level of self-sufficiency for wheat and barley combined has been maintained at, or slightly above, the 1980 level.

In the mid-1980s a number of exporting countries sought greater access to the Japanese market for agricultural products. The Japanese Government has argued that any further opening of the domestic market for imported farm products, including grains, must be considered from the standpoints of 'harmonised' international relationships and the sound development of domestic agriculture. The Government therefore believes that it will be necessary to maintain minimum border measures designed to place some limit on external competition (MAFF 1986a).

Coarse grains

During the period of high economic growth in Japan following the Second World War until the mid-1970s, rising incomes resulted in a rapid increase in demand for livestock products. In response to this demand the intensive livestock industries, producing in particular pork and poultry meat, based on mainly imported feed grains developed rapidly. Because of the importance of imports of feed concentrates, a stable, adequate and secure supply of imported livestock feeds has been, and remains, an objective of government policy. Maize and sorghum are the main grains used for feed, although appreciable quantities of barley and feed wheat may be used (BAE 1981). Grains imported for livestock feed are admitted duty-free.

Japan also uses significant quantities of imported grains for industrial purposes. These grains are mainly maize for the

manufacture of starch and sweeteners, and malted barley for use in the production of malt products and alcoholic beverages.

Maize used to produce specified products such as corn starch, corn flakes, ethyl alcohol, distilled alcoholic beverages and popcorn may be imported duty-free under a tariff quota system. All imports in excess of a predetermined quota are subject to an import duty of 10 per cent. Maize imported for the production of high fructose corn syrup is admitted duty-free at the point of entry unless the quota is exceeded. However, in April 1982, surcharges were imposed on domestic production of this syrup which, in effect, is the equivalent of imposing tariffs and taxes on all inputs to the production of high fructose corn syrup.

The bulk of Japan's malt requirements is imported under a tariff quota arrangement through which quotas are determined half yearly. Imports falling within the limits of the quota attract a nominal duty, but those in excess of the quota are dutiable at specific rates which, when converted to effective *ad valorem* rates, are in the vicinity of 40 per cent.

Imports of feed grains increased by more than 1200 per cent in the period 1960–82 (MAFF 1984) and have been maintained at high levels. As a consequence of the great reliance on such imports, Japan has adopted a stabilisation policy for feed imports to reduce the impact of volatile world coarse grains prices on its livestock industries. This policy has been implemented by diversifying sources of supply and maintaining both substantial stocks and a pool of buffer funds.

Sugar

There has been a gradual increase in sugar production in Japan over the past fifteen years, so that domestic sugar production now represents about one-third of Japanese market requirements. Present government policy is to restrict the domestic industry's share to this level.

Both cane and beet sugar are grown, the cane industry being physically limited to the small islands in the south and the beet industry being centred in the north where

it competes with grains, soybeans and fodder crops. Beet production, in particular, has expanded significantly since the late 1970s because of the relatively high level of support that the beet industry receives compared with other industries.

The current sugar policy was established in 1965 and is administered by the Japanese Sugar Price Stabilisation Agency. The marketing environment for sugar is designed to protect domestic producers from import competition, to maintain the profitability of domestic sugar cane and beet production and to stabilise the price of sugar to consumers. These objectives are achieved by maintaining a high domestic sugar price, made possible by imposing a duty on imports and an excise tax at the point of sale and by using a relatively complex system of variable charges and rebates to stabilise prices to consumers. (For details of the systems of variable charges and rebates, see BAE 1981.)

Each year the Ministry of Agriculture, Forestry and Fisheries fixes minimum producer prices that growers are to receive for their cane and beet from millers and processors, and the buying price that the Stabilisation Agency is to pay millers and processors when it purchases all domestically produced sugar. The minimum producer prices are based on a parity index, taking into account production costs and other economic factors such as household expenditure of producers and incomes of producers compared with those of wage and salary earners. The Agency's buying price is based on minimum producer prices plus the average cost of collecting, milling and processing the product.

Domestic sugar is purchased by the Agency at the buying price in volumes proposed by millers and processors provided that millers and processors have paid growers at rates not less than the minimum producer price. The purchased domestic sugar is resold to the original millers and processors at the price at which the Agency sells imported raw sugar back to the importers. In practice the transaction is a matter of paper entries only, since no physical relocation of stocks occurs. Under the stabilisation

arrangements, imported sugar is subject to a specific import duty and either a levy (and/or surcharge) or a refund.

Frequently, the Agency's resale price of domestic sugar is less than the buying price. The deficit can be financed from two sources. The first is by a government budget outlay and the other is by disbursement of accumulated stabilisation surcharges on imports of raw sugar held in the Price Adjustment Fund of the Agency.

Although support prices have been altered from year to year, the basic policy mechanisms regulating the Japanese sugar industry were not changed significantly until April 1982. The high domestic sugar prices in the late 1970s encouraged the growth of a high fructose corn syrup industry. The rapid growth in the production of this syrup, which is produced mainly from imported maize, adversely affected the profitability of the domestic sugar refining industry, and in October 1982 the production of the syrup was brought under the control of the Agency. As with sugar, all production of high fructose corn syrup is sold to the Agency at an agreed price. Simultaneously, the Agency sells the same syrup back to the same processor at another predetermined price.

A surcharge is imposed on high fructose corn syrup production and is set periodically at rates supposedly to maintain production at the levels prevailing in 1982 so as to prevent further penetration of the Japanese sugar market. A second surcharge can also be imposed on any excess production of a processor who produces over the quantity allotted by the Ministry of Agriculture, Forestry and Fisheries and is added to the Agency's resale price. A similar surcharge scheme was also introduced in 1982 on any excess production of a sugar refiner.

Regardless of these measures, growth in the sweetener market has been met almost entirely by increased production of high fructose corn syrup. This stems from the fact that the syrup remains exempt from an excise tax which is placed on sugar at the point of sale and which accounts for the bulk of the cost disadvantage on sugar compared with high fructose corn syrup.

However, this discrimination should soon be removed as, under the recently announced reforms to the Japanese taxation system, it is proposed to abolish the excise tax on refined sugar. Nevertheless, it can be expected that, with further development, some of the new synthetic sweeteners such as aspartame will make significant inroads into the shares of both sugar and high fructose corn syrup in the sweeteners market.

Fruit

The main tree fruits produced in Japan are mandarin oranges and apples. Appreciable quantities of Japanese pears, persimmons, 'summer' oranges, grapes and strawberries are also grown. Japan is largely self-sufficient in these fruits, although imports of citrus fruit are admitted to supplement domestic production, particularly in off seasons. Since only small quantities of tropical fruits can be produced, imports of these products are necessary.

Japan is fully dependent on imports for its supplies of dried vine fruit and largely dependent on imports of canned deciduous fruit. In recent years, domestic wine production has increased markedly but imported wine is still occasionally used for blending with the local product.

While most agricultural crops in Japan are supported by a system of administered prices related to production costs, the main fruit industries are not supported in this way to any appreciable extent. However, quarantine barriers, in particular, together with quantitative import restrictions and substantial import duties, protect domestic industries from imports. Although the quarantine measures are strict they are now more relaxed because of the use of more effective fumigants.

During the 1960s the area devoted to citrus plantings, principally mandarins, expanded rapidly. When the trees reached full bearing capacity there was an oversupply of mandarins, which prompted the Government to intervene in the mid-1970s to offer producers incentives to move out of citrus production and into alternative crop production (Coyle 1986). Although the initiatives have resulted in

some reduction in the area planted to citrus, Japan competes with Spain and Italy for the position of the world's third largest producer of citrus (after the United States and Brazil).

Beef

In the production of livestock products, Japan is at a competitive disadvantage relative to the major exporting countries. To achieve domestic output goals, therefore, returns to producers are maintained at well above world prices by a broad range of supports — subsidies, direct cash payments, managed stocks and quantitative restrictions on imports. In this way domestic wholesale prices have been maintained at about two to four times higher than world prices.

Prices in Japan are kept relatively stable by marketing beef within a formula-determined price band. Prices are maintained within the band by controlling imports and managing stocks of beef. If the market price appears likely to fall below the mid-point of the band the Ministry of Agriculture, Forestry and Fisheries further restricts imports and the Livestock Industry Promotion Corporation may intervene to purchase stocks at the floor price. If, however, prices rise or appear likely to rise above the band the Corporation may release stocks of domestic or imported beef, thereby placing downward pressure on prices.

The Corporation generates large surpluses of funds by imposing import levies to raise the price of imported beef on the domestic market. The levy rate is variable, increasing when world beef prices fall relative to the Japanese stabilisation price band and decreasing as world prices approach the band. The funds from these beef import levies are used to provide much of the direct support to the livestock industries, including the dairy industry.

The Japanese beef quota policy has been evolving over time. Access to the Japanese market was perceived by exporters in the 1970s to be constrained by the size of the global quota. The unpredictability of access was also of concern to exporters after the suspension of Japanese beef imports in the 1974–75 period. Later, the

composition of the quota became topical. In 1978 the quota arrangements were changed to include a 'high quality component' which, in effect, meant grain fed beef. This development has favoured some suppliers, principally the United States, at the expense of others, such as Australia, which provide essentially grass fed beef.

Apart from the introduction of the high quality component there have been two other important developments in the administration of quotas. The first was the introduction in 1984 of the simultaneous buying and selling system. This measure is designed ostensibly to give user groups more discretion in the choice of the types of beef imported. Its operation has resulted in a further switch in imports away from grass fed beef to grain fed beef.

The second development was the introduction of a component in the quota entitled the 'demand development quota'. This is an explicit quota for grain fed beef and was introduced on the basis of needing to encourage consumer preference for imported grain fed beef. The basis for the quota seems inconsistent with the fact that there is a strong preference for this beef.

Two emerging issues are the growth in the domestic supply of beef and the increasing imports of diaphragm beef. Since 1965 dairy steers have been the most important source of increases in domestic supply. However, the growth in female dairy cattle numbers has slowed in the 1980s partly because of a surplus of dairy products. Nevertheless, developments since the mid-1980s are favouring faster growth in dairy cow numbers. There has been a large increase in the demand for veal, resulting in higher calf prices and making the production of dairy-type veal more profitable. As a result, the slaughter rate of female animals is likely to decline.

Since the mid-1980s imports of diaphragm beef, mainly from the United States, have increased rapidly. Diaphragm beef is not subject to a quota, but the US product, which is of high quality and has a significant degree of fat marbling, is perceived to be competing with grass fed carcass beef, imports of which are subject to a quota. Continued growth in imports of

diaphragm beef could lead to a reduction in the global quota for carcass beef.

Dairy products

The Japanese market for fresh milk for direct human consumption, which currently absorbs about 60 per cent of total milk production, is to some extent naturally protected from imports by Japan's location and the technical problems in transporting fresh milk over long distances. However, changes in technology associated with the ultra high temperature (UHT) process may reduce this natural protection.

The manufacturing milk market, in contrast, enjoys no such natural protection. The manufacturing milk sector cannot compete with imports of dairy products landed at world market prices. In general, domestic dairy prices are two to three times higher than world prices. Therefore, for the sector to survive and for the goals of income support to producers, output expansion and price stabilisation to be met, a substantial degree of government intervention has been undertaken.

The level of returns to producers of manufacturing milk is set each year by the Ministry of Agriculture, Forestry and Fisheries, with guaranteed minimum prices based broadly on an annual cost of production survey. Returns are maintained at the desired level by a combination of supply controls and deficiency payments administered by the Livestock Industry Promotion Corporation. The supply controls consist of import quotas and tariffs and are employed to raise prices above import parity to a 'stabilisation indicative price' appropriate for each designated product such as butter, cheese and most major condensed or powdered dairy products.

The indicative prices applying to the wholesale price of dairy products are converted to a standard transaction price for manufacturing milk by deducting processing costs. The standard transaction price is paid to milk producers. The amount by which the standard price falls short of the guaranteed minimum price is paid to producers as a deficiency payment. These payments, allocated by the national

Treasury, represent the major form of direct income support.

Under the price stabilisation arrangements the Livestock Industry Promotion Corporation, subject to the guidance of the Ministry of Agriculture, Forestry and Fisheries, manages supplies of designated products to ensure that prices remain between 104 per cent and 90 per cent of the stabilisation indicative price set each year for each product. Imports of designated products are permitted, as necessary, for the indicative prices to be maintained. When the market price marginally exceeds 100 per cent of the indicative price the decision may be taken to import if stocks are deemed inadequate. Once the market price rises above 104 per cent of the indicative price, stocks are released to prevent the price from rising further. In the event of market prices falling, or if they are likely to fall, below 90 per cent of the indicative price the Corporation may intervene to withdraw stocks to prevent further price falls.

Japanese policy with respect to dairy products has remained largely unchanged since the 1970s, although some variation in the support prices has occurred. In 1986 there was a decrease in guaranteed prices and deficiency payments, the first such reduction since the introduction in 1966 of the deficiency payment scheme for raw milk destined for processing. There has also been some lowering of the stabilisation indicative price for butter, but for other designated products, prices have remained unchanged since 1985. Offsetting these changes has been increased direct budgetary support aimed at securing milk of a higher quality. And now there is a proposal to establish a ¥20 000 fund, separate from current support arrangements, to encourage both domestic cheese production and consumption over five years. The introduction of the proposal could result in a significant reduction in Japanese cheese imports over the next four years.

Fish

From 1965 to 1978, the average consumption of fish per person in Japan increased significantly from about 29 kg to

34 kg. At the same time prices for fish increased more rapidly than those for meat, resulting in increased meat consumption. However, fish, which is part of the traditional Japanese diet, remains the major source of the protein intake of the Japanese population. Limitations on fish supplies could accentuate the move away from the traditional diet toward a diet with meat as a major source of protein.

Before 1976 Japan was a net exporter of fish. Since 1976, imports have grown steadily while a number of factors have combined to limit the growth in exports. These factors include the adverse effects of high oil prices on the operations of the distant waters fleet, the extension of economic zones by other countries over waters in which the distant waters fleet previously operated and the fact that existing Japanese fishing grounds are fully exploited. The effects of the reduced access of Japanese vessels to fisheries as a result of the extension of economic zones have been partly offset by negotiating access to other countries' waters. Japan now either conducts joint ventures with other countries or pays fees for the right to fish in another country's waters. Nevertheless, landings by the distant waters fleet in international waters decreased by about 50 per cent between 1973 and 1982, and the catch taken in joint ventures or under licence within 200 miles of foreign states also fell significantly.

The Japanese fishing industry receives a measure of protection from imports by quarantine regulations, by quantitative restrictions on imports and to a lesser extent by import duties. All imports must satisfy the requirements of the Food Sanitation Law. A number of products such as cod, herring, sardine, mackerel, shell fish and squid are subject to quantitative import restrictions. Imports of raw fish are subject to *ad valorem* import duties of 3–6 per cent, but products processed to the fillet stage or further are dutiable at rates of up to 15 per cent.

Forest products

Japan is one of the world's foremost wood using economies. Domestic industrial construction, housing and paper using

industries and export oriented electrical manufacturing and paper industries are the major wood consuming sectors. Despite government support and incentives to promote reafforestation and greater productivity in the Japanese forestry industry, domestic production has been unable to keep pace with the rapid growth in the consumption of wood and wood products. As a consequence, there has been an increasing reliance on imported wood, largely logs, so that imports in 1983 represented about two-thirds of total consumption.

The emphasis on importing wood with minimum processing, such as logs, wood chips and pulp, reflects the maintenance of policies favouring Japanese processing industries. Essentially, assistance to Japanese forest product industries involves tariffs, subsidies and non-tariff barriers such as timber grading standards and building codes.

The tariff structure for Japanese forest products is characterised by tariff escalation — the tariff rate on imported products increases as the degree of processing intensifies. However, there is a generalised system of preferences, whereby reduced tariffs are applied to products of specified supplying countries, mainly developing countries.

In recent years there has been a growing reluctance by some countries to export sawlogs. Indonesia, Malaysia and the Philippines, Japan's major suppliers of hardwood, have imposed export controls on logs, while the United States and Canada, exporters of softwoods, have also imposed export controls on logs. As a consequence, Japan has been progressively relaxing trade barriers and seeking new sources of supply.

Following further trade negotiations with the United States, Japan has hastened the implementation of cuts in import tariffs agreed to in the 1979 multilateral trade negotiations under the General Agreement on Tariffs and Trade. Japan reduced tariff rates by 20 per cent from January 1986 on a range of wood products and has agreed to further reductions in April 1987, with the possibility of further cuts in April 1988.

Appendix B Agricultural Basic Law of 1961

The main objectives of agricultural policy in Japan have been laid out in the Agricultural Basic Law, 12 June 1961. According to Saxon (1981) and Ogura (1982), these objectives can be summarised as follows:

- selectively expanding the output of products in growing demand;
- increasing productivity and hence output by using land effectively and developing agricultural technology;
- improving farm structure, including the scale of management;
- rationalising marketing, and promoting the processing of farm products;
- stabilising prices and ensuring adequate farm income;

- rationalising the production and distribution of farm requisites and stabilising of their prices;
- training farmers and providing adequate alternative employment opportunities for those engaged in farming (and their dependants) who wish to leave; and
- improving rural welfare.

Additional policy aims include narrowing the gap in productivity between agriculture and other industries to enable farmers to achieve parity in living standards with those employed in other industries, and supplying the domestic market with domestic production to the greatest extent possible.

Appendix C Employment trends in agriculture

In the 1950s, farming was the principal economic activity in Japan (BAE 1981). However, during the 1960s, sustained economic growth resulted in great structural change. Farming became largely a part-time occupation, with a shift of labour out of agriculture into the burgeoning manufacturing and service sectors. It is estimated that about 370 000 males left agriculture each year in the first half of the 1960s (MAFF 1986a). The major group leaving agriculture were men under 19 years of age.

In the second half of the 1960s a large number of men 35 years and over also moved into non-agricultural occupations.

This was mainly a response to the demand for labour in the industrial sector and a shortage of young people in the industrial workforce resulting from a low birth rate during and after the Second World War and from young people staying longer at school.

The rapid movement of labour out of agriculture has slowed somewhat since the mid-1970s. By the mid-1980s, about 170 000 males were leaving the sector each year. Partly offsetting these losses, however, has been a fairly constant movement into agriculture each year of about 120 000 men 50 years and older from other industries. The net effect of the

3 Key indicators of the structure of the Japanese agricultural sector

Indicator	Unit	1960	1980
Composition of employment in rural areas			
Primary industry	%	54	24
Manufacturing industry	%	21	34
Service industry	%	25	42
Percentage of farm youth entering higher education on completion of compulsory studies	%	61 a	97 b
Provision of public facilities			
Total rural roads paved	%	2	42
Households with water service	%	56	83
Farm family households			
Members per farm household	no.	5.7	4.5
Members over 60 years of age per farm household	no.	0.7	1.1
Percentage of full-time farmers over 16 years of age per farm household	%	58	36
Percentage of farm household income attributable to agriculture	%	50	16
Food self-sufficiency of farm households	%	56	18
Durable consumer goods			
Rural households with a refrigerator	%	37	100
Rural households with a passenger car	%	9	78

a In 1963. b In 1984.

Note: Based on more qualitative information contained in the source it can be deduced that the general direction of movement in the indicators between 1960 and 1980 has been maintained to the mid-1980s.

Source: MAFF (1986a).

4 Spending per person in farming households relative to wage earning households in Japan

Wage earning household = 100

Household type	Year ended	Relativity
	31 March	
Average of all farming households	1970	95.3
	1975	107.1
	1980	113.4
	1981	111.4
	1982	110.6
	1983	110.6
Full-time farming households (with full-time key male workers)	1983	90.3
Farming households earning wages on a temporary basis	1983	93.5
Farming households earning wages on a permanent basis	1983	115.2

Source: MAFF (1986b).

population shifts of the 1960s to the mid-1980s was a greatly reduced number of persons in the agricultural workforce and an ageing of that workforce.

Along with this change in the farm workforce has been a significant change in the occupations of members of farm families. There has been a decline in the absolute number of part-time farmers within farm households. This has eventuated because of the trend toward smaller families and the movement of young, previously part-time, farmers into permanent non-farm jobs (MAFF 1986a). Young members of farm families as a consequence now tend to fall into two groups of extremes. The smaller group consists of those working in only agriculture. In 1985, 10 per cent of young members of farm families were in this category compared with 30 per cent in 1960. The second group is comprised of young members of farm households whose main or sole occupation is in an industry other than agriculture. In 1960, 50 per cent of members of farm households were in this class, but by 1985 almost 90 per cent were employed full-time in non-agricultural activities (MAFF 1986a). It can be deduced from the changes in occupations during the past 25 years that the great majority of young members of farm families are engaged in the same types of employment as city-based wage and salary earners.

Consistent with this general trend toward a reduction in the agricultural

workforce, the number of young men (under 35 years) entering agriculture has declined. On average, 1.6 young males per 100 farm households entered agriculture each year in the early 1960s. This rate had fallen to 0.5 by the late 1970s and has been low ever since. However, departures from this national average occur for particular agricultural industries. More young males enter the dairy and intensive livestock industries and operations that are large than the land extensive industries.

A number of key indicators of the structure of the Japanese agricultural sector in 1960 and 1980 are presented in table 3. From the data presented it can be seen, among other things, that employment in agriculture has diminished in importance, fewer younger people are in agriculture, a distinct ageing of the agricultural workforce has occurred and food purchases by farm households have increased. However, one of the most striking changes indicated is that, although off-farm income was a significant component of total farm household income in the 1960s, it is of even greater significance in the 1980s. This importance of off-farm income is reinforced by data presented in table 4.

Appendix D Changes in farm size

Japan's level of self-sufficiency in food fell from 90 per cent in 1960 to about 70 per cent in 1978. The reasons for the decline have been attributed to the small amount of arable land available and the attendant conditions of economic growth for much of the period. These included the encroachment on agricultural land by industrial and residential development, and the construction of a highway system for road transport. Nevertheless, the nature of Japanese farms changed markedly in this period. Greater mechanisation and changes in product mix increased productivity. However, the average size of farms remained fairly static, with the cultivated area rising from an average of 1.0 ha in 1960 to only 1.1 ha in 1979.

The small size of farms can be traced back to the Allied Forces occupation in the years immediately after 1945, when significant land reform measures were instituted. Absentee landlordism was abolished and the Government resumed about one-third of all agricultural land which it sold to former tenant farmers. Because of the limited land area and the large number of potential farmers, limits were imposed on farm size so that no holding was to exceed 3 ha except on the island of Hokkaido where the upper limit was fixed at 12 ha (BAE 1981). While these limitations became ineffective during the 1960s and were removed in 1970 (BAE 1981), attempts to increase farm size to achieve economies of size have been relatively unsuccessful.

This lack of success has been attributed to a number of factors rooted in both tradition and empirical experience. Japanese farmers have had a traditional attachment to their land, a cultural phenomenon in most countries, especially where land is scarce and where there is a history of heavy economic dependence on land. Following the land reforms after the

Second World War, such an attachment would have been reinforced by the fact that many Japanese farmers had gained freehold title to land which they had previously occupied as tenants only (BAE 1981). The traditional attachment, combined with the encroachment of factories, residential areas and roads, together with high support prices for commodities acted to increase land prices greatly which led to expectations of further price increases. This encouraged a speculative desire to retain land. In addition, there was concern that if land was leased to others the right of owners to reoccupy their land at a later stage might be jeopardised. This concern was based on the experience of seeing landlords dispossessed of their land under the land reform measures. Farmers who might have been potential lessors were also wary of what their rights might be in view of the example of the very limited rights enjoyed by city landlords (BAE 1981).

Although progress toward achieving larger sized farms has been hindered, some progress has been made. It is estimated that between 1960 and 1985 the number of large farms (more than 5 ha) increased from 1500 to 19 000 (MAFF 1986a). Of these farms about 52 per cent are engaged in rice production and about 26 per cent in dairying.

Although land purchase has played some part in the move to larger operating units it has been relatively minor. By far the greatest emphasis in increasing farm size has been placed on leasing which has been encouraged by two major factors. The first is that the market value of land tends to reflect not only the capitalised value of the rental stream accruing to that land when used for agricultural purposes, but also the capitalised value of the various non-pecuniary benefits which flow from land ownership (for example, its value from a recreational or cultural viewpoint).

The value placed on these non-pecuniary benefits tends to restrict the ability of farmers interested only in the agricultural value of a neighbouring holding to make an outright purchase of that holding. The second factor was the introduction in 1975 of the Agricultural Land Use Promotion Measures. These measures were designed to promote the tenancy of farm land and contained the 'right to use' clause which simplified renting procedures between the land owner and the user. The area of farm land under lease covered by the clause has increased steadily, but the growth rate has slowed recently (MAFF 1986a).

As a consequence of slowing growth rates in leasing and a desire to ensure that all suitable farm land is used, the Ministry

of Agriculture, Forestry and Fisheries is currently advocating three policy measures. The first is to 'gather' farm land around 'core' farm households (that is, farm households with at least one full-time male farmer) through land lease. As part of this process, adjacent farm land would be consolidated into larger units for each farmer to operate. At present, farm lands operated as larger units tend to be fragmented and dispersed. The second measure is to establish longer leases associated with the 'right to use' so as to stabilise the operation of leased land. The third policy measure is designed to incorporate land effectively made idle by the ageing of the owner into the leases of core farm households.

Appendix E The increased cost of agricultural policies to households

Most of Japan's import competing food industries are protected by quantitative restrictions rather than *ad valorem* tariffs. This form of protection has meant that the recent appreciation of the yen and the fall in world food prices (table 5) have not been fully reflected in lower domestic food prices in Japan. In order to estimate this recent increase in the burden borne by Japanese consumers because of agricultural policies, two simplifying assumptions are made.

- World agricultural prices and Japanese non-food prices do not vary in response to Japanese agricultural policies or to shifts in the yen-denominated Japanese demand for food.
- All Japanese imports of food are protected in ways which prevent world price changes from being reflected in domestic prices.

Calculations are based on Japanese household expenditure on food, which is approximately 27 per cent of total household expenditure. However, the estimates of household expenditure on food include a substantial service component. Therefore, calculations are also made under the alternative assumption that Japanese household expenditure on food is 10 per cent of total household expenditure. The calculation of the cost to Japanese consumers is based on the appreciation of the yen and the reduction in world food prices over the year ended August 1986.

These estimates do not capture the *overall* cost to Japanese consumers of Japan's agricultural policies. Rather, they capture *only the recent increase in this cost* following the real appreciation of the yen and the fall in world food prices.

Yen appreciation

Over the year ended August 1986 the yen appreciated by 28.3 per cent in real terms against the Special Drawing Right (the

weighted average of market rates of a fixed group of currencies against the US dollar). The estimated cost to Japanese households of not allowing this appreciation to be reflected in lower domestic food prices is given by:

$$C_A = \Delta r \times E$$

where C_A is the cost to Japanese households; Δr is the percentage change in the real value of the yen against the Special Drawing Right; and E is the household expenditure on food.

In the calculations, E was set equal to either:

- the value quoted for household expenditure on food in the family income and expenditure survey; or
- 10 per cent of total household expenditure.

Under assumption (i), C_A equals ¥252 054 per household, which is equivalent to 7.6 per cent of total household expenditure.

Under assumption (ii), C_A equals ¥93 472 per household, which is equivalent to 2.8 per cent of total household expenditure.

5 Basic data used in calculations

Item	Unit
In year ended August 1986	
Changes in exchange rates	
SDR per yen (nominal)	+ 31.0 per cent
SDR per yen (real)	+ 28.3 per cent
Change in world food prices in SDR terms	- 26.0 per cent
In year ended June 1986	
Total Japanese household expenditure	¥3 302 900
Japanese household expenditure on food	¥890 651

Sources: International Monetary Fund (1986); Statistics Bureau (1986).

Fall in world food prices

Over the study period the index of world food prices in terms of the Special Drawing Right declined by 26 per cent. The cost to Japanese households of not allowing this fall to be reflected in consumer prices is given by:

$$C_p = \Delta P \times E$$

where C_p = cost to Japanese households; and ΔP is the percentage fall in world food prices.

The two assumptions of the value of E are again used. Under assumption (i), C_p equals ¥231 569 per household, which is equivalent to 7 per cent of total household expenditure.

Under assumption (ii), C_p equals ¥85 875 per household, which is equivalent to 2.6 per cent of total household expenditure.

Total cost to Japanese households

The total cost per Japanese household, C , was calculated using the two assumptions of E .

Under assumption (i), C equals ¥483 623 per household, which is equivalent to 14.6 per cent of total household expenditure.

Under assumption (ii), C equals ¥179 347 per household, which is equivalent to 5.4 per cent of total household expenditure.

At the September 1985 exchange rate (¥162.79 = \$A1), these costs are equal to \$A2971 and \$A1102 per household, respectively. At the August 1986 exchange rate (¥93.79 = \$A1), these costs are equal to \$A5156 and \$A1912 per household, respectively.

Appendix F Partial equilibrium effects of government intervention

The analytical tool used in this appendix is partial equilibrium analysis using supply and demand functions. The main emphasis is on price, production, income and trade effects of different policy options. Although the approach suppresses interactions between commodities which are linked by substitution and competition, partial equilibrium is nonetheless a useful approach for assessing direct and immediate economic impacts. Since the goal is mainly descriptive and not quantitative measurement, the analysis will also be static or 'timeless'.

It is stressed that the purpose of this appendix is not to unravel the confusing lexicon and intricacies of the various Japanese agricultural programs, but to examine the relatively simple effects of alternative policies relying on diagrammatic analysis. The alternative policies to be considered are production subsidies and consumer taxes, deficiency payments, tariffs and quotas.

Production subsidy and consumption tax

This policy which has the primary aim of securing internal price guarantees for producers is a neat, effective, easy-to-operate policy. Because it disconnects world prices from the domestic market, the policy introduces stability into the domestic market to the supposed benefit of both consumers and producers. It requires no special expertise to operate and may be designed to generate revenue for the Treasury.

A partial equilibrium view of this policy is shown in figure G. This policy approximates that for wheat and rice. It has also been assumed that Japanese policy does influence world prices, a not unreasonable assumption given Japan's prominence in the world economy.

Part (a) of figure G shows the demand, D_w , and supply, S_w , curves for the rest of the world (excludes Japan). Since supply exceeds consumption except at very low prices, the rest of world is a net exporter. Its export supply schedule is shown as curve S_E in part (b).

Japan's demand, D_j , and supply, S_j , curves are shown in part (c) of figure G. Since Japan is a high cost producer, the quantity demanded exceeds the quantity supplied except at very high internal prices; hence Japan is a net importer. This gives rise to an excess demand curve which is shown as D_E in part (b).

In the absence of Japanese government intervention, the international equilibrium price of P_w would result in Japanese imports of M , as Japanese production, Q_j , at this price is unable to satisfy Japanese domestic consumption C_j . To provide an incentive for increased domestic production, Japan has established a producer price of P_p which, as earlier parts of this paper have indicated, is well above the world price. Indeed in the case of rice, the results of Riethmuller (1984) indicate the producer price is well above the autarky price. If the Japanese Food Agency were to accept all that would be offered to it at P_p , it would be supporting the world market price at that level and building up stocks in the process. To avoid this, the Food Agency restricts imports to M_I , which results in a price to Japanese consumers of P_c . As imports are restricted to quantity M_I , the price in the rest of the world falls to P_{w1} , while production there declines and consumption expands. The excess demand curve for Japan in the presence of these policies becomes D_{E1} .

In practice, the situation is much more complicated than what has been shown here. For example, the diagram is broadly representative of the policy applied in the rice industry. Because of the higher prices to producers, over time, resources would

be attracted into the industry in Japan, resulting in a rightward shift of the supply curve and hence a leftward shift of the excess demand curve. Further, because the policy effectively reduces the real income of Japanese consumers, the demand curve would shift to the left, further accentuating the leftward shift of the excess demand curve. On the other hand, the diversion program for rice, for example, which has offered farmers financial inducements to move land out of rice production, would have the effect of shifting the Japanese supply curve (excess demand) back to the left (right). The central point remains, however, that the Japanese policy has imposed costs on consumers in Japan and producers in other countries, while it has imparted a subsidy to Japanese producers. This has led to an inefficient allocation of resources in Japan and in other producing countries, resulting in income loss for Japan and other participants in the market.

Deficiency payments for producers

This policy is basically a production subsidy supported by taxpayers rather than by consumers. The shift in burden from consumers to taxpayers occurs because consumers are permitted to purchase both imports and competitive domestic output at open market prices. Recall that for rice, Japanese consumers, although not paying the price producers receive, still pay a price several times the world price. Therefore, although taxpayers provide most of the support, some still comes from consumers. With deficiency payments, the price guarantee to producers is entirely supported by direct payments from the Treasury. No quotas, tariffs or levies are required; hence, trade is not directly restricted. Figure H illustrates the workings of this policy.

Since the demand and supply curves for Japan and for the rest of the world are assumed to be the same as in the previous case, the same world price, P_w , would prevail if there were no intervention.

Producers respond to the support price P_p , but market prices would be allowed to

seek a level consistent with the unfettered flow of imports. The market price in Japan falls to P_c , the same as the world price, while the deficiency payment to Japanese producers is $P_p - P_c$. Producers notice no change in the guaranteed price, only changes in the portions obtained from the market and from deficiency payments. Japanese consumers are better off than they would be under free trade because the protected domestic production causes world prices to fall.

Exporters to the Japanese market would see deficiency payments as a less onerous method of protection than the measures presently in place which, as argued in the previous section of this appendix, tend to raise and insulate consumer prices from international market forces. Under a deficiency payment scheme, imports are restricted less stringently than with production subsidies and consumption taxes.

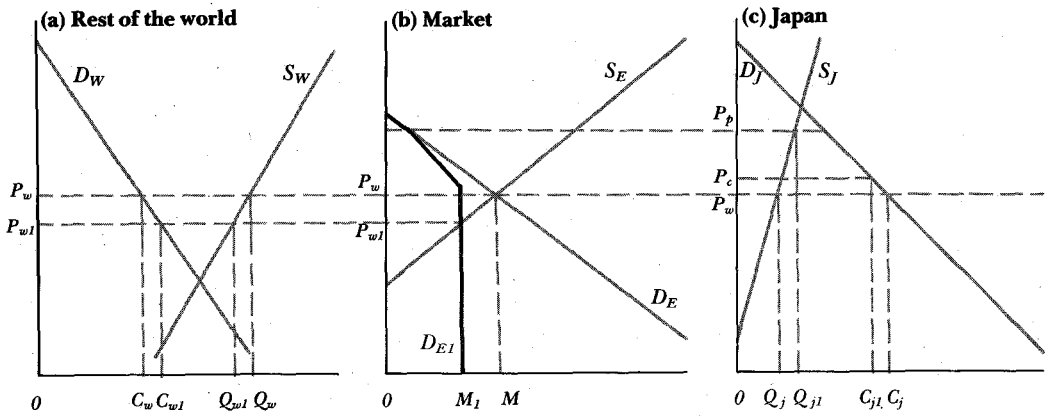
From the protected sector's viewpoint, a deficiency payment scheme has the drawback that the full value of protection given to the industry will appear in the national budget. This transfer is, therefore, subject to direct scrutiny by taxpayers and their elected representatives. Consequently, it is likely that domestic producers will be forced to restate and defend their favoured status each time budget allocations are being made. While this is healthy for the economy as a whole since it will inevitably lead to a more reasoned political choice, it is not a task that protected groups relish.

Tariffs

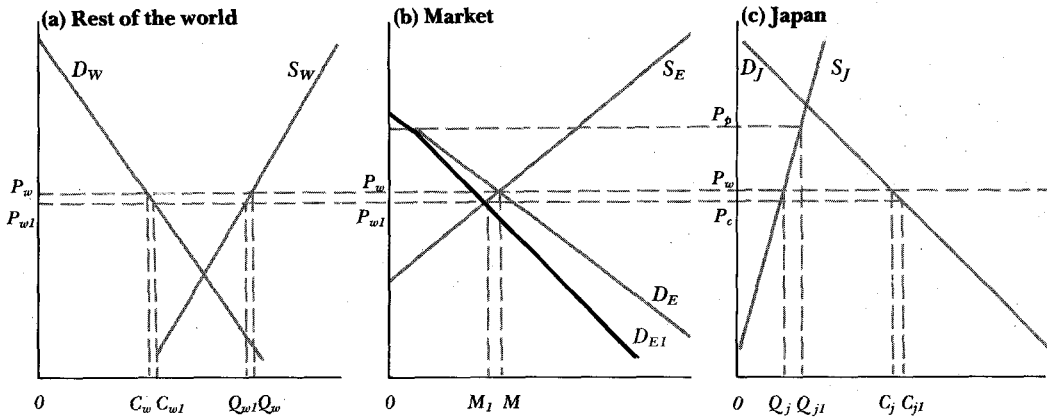
A tariff has the effect of a production subsidy and a consumption tax being applied at the same rate. For a country attempting to minimise imports, a tariff can be shown to be the best instrument because it stimulates production and at the same time discourages consumption (Bhagwati and Srinivasan 1983). This result is conditional on a number of assumptions, not the least of which are that the country is small and that there are no other distortions in the economy.

However, despite this, compared with the present policy which sets producer prices

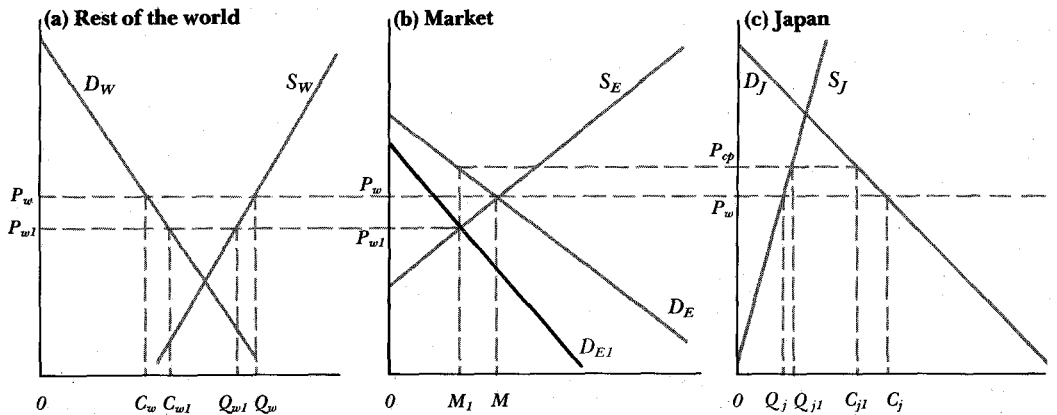
G Partial equilibrium effects of a production subsidy and a consumption tax



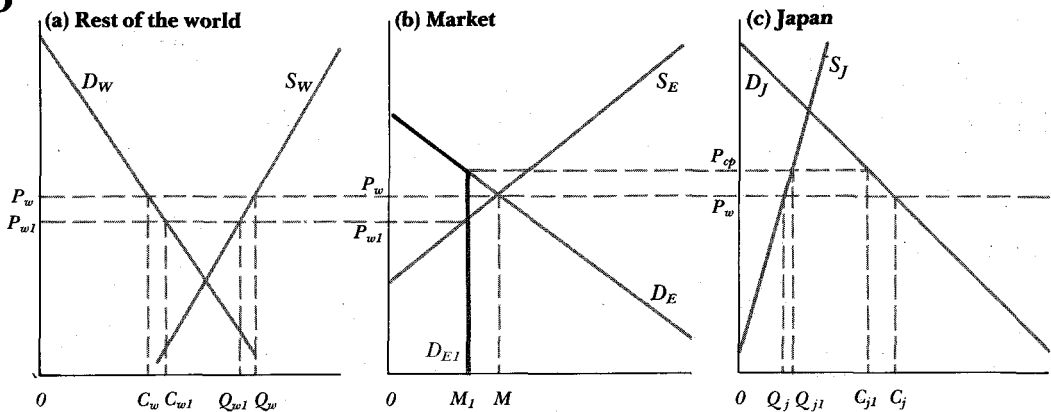
H Partial equilibrium effects of a deficiency payment



I Partial equilibrium effects of a tariff



J Partial equilibrium effects of a quota



and consumer prices with seemingly little regard for international prices, a tariff has the advantage that internal prices at least reflect movements in international prices. Zwart and Meilke (1979) have shown that with tariffs the world price is less stable than with free markets, but is more stable than with the present policy. Hence, a shift from the present policy to tariffs would impose fewer adjustment costs on Japan's trading partners.

The workings of a tariff are shown in figure I. It is assumed that a combination of a fixed and an *ad valorem* tariff is imposed in such a way that tariff protection increases as world prices decline. In terms of the stability of world prices, such a policy imposes greater instability than a fixed tariff, but less instability than a regime in which domestic prices are set independently of world prices.

Japanese consumers and producers face the same price, P_{cp} , determined by the intersection of the tariff-ridden Japanese excess demand curve, D_{E1} , and the excess supply curve of the rest of the world, S_E . The level of imports is M_1 and the world price is P_{w1} , less than the free trade world price, P_w .

Quotas

The overall consequences of a quota and a tariff are similar. Internal prices rise, domestic production expands, domestic utilisation declines and world prices and

imports fall. As with a tariff, the relative sizes of the domestic and international price changes depend on the absolute price elasticities of the excess demand and excess supply curves.

An important difference between a tariff and a quota is that, with a quota, domestic prices do not respond to changes in world market conditions while markets adjust more or less automatically with tariffs. Hence, from the viewpoint of exporting nations, quotas are more onerous than tariffs.

In terms of figure J, the excess demand curve for Japan with the quota imposed is D_{E1} . The world price in the presence of intervention is P_{w1} and the internal price is P_{cp} . If there is a glut on world markets, which has the effect of moving the excess supply curve for the rest of the world, S_W , to the right, Japanese prices and imports will remain unchanged with a quota. It is because of this that quotas have received almost universal condemnation as an instrument of policy in the literature on trade policy.

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